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ABSTRACT

Part of a series of needs assessment studies conducted at the Kent State School of Library Science, this study reports the results of a survey concerning library employment opportunities in Ohio for individuals with graduate degrees in library science. The three main objectives of the study were: (1) to estimate the number of professional and support staff positions to be filled in Ohio libraries through 1990, (2) to determine the Ohio regions most likely to offer the most employment opportunities, and (3) to identify the skills and specialties likely to be in greatest demand through 1990. A survey questionnaire was sent to a sample of Ohio academic, public, special, and school library directors. Descriptive statistics were applied to the survey data. Projected annual openings in Ohio libraries were compared to the number of new MLS degree-holders expected to graduate from Ohio programs. Since library growth rates will slow through the 1980s, it was found that projected library personnel needs can be filled by the existing Ohio graduate library science programs. Included in the study are 53 tables, a 19-item reference list, and 10 appendices, one of which is a copy of the survey questionnaire. (JL)

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Alternative Modes for Providing Graduate Education for Librarianship in Ohio

Phase One: Needs Assessment

Related Paper # 2

A SURVEY OF PROJECTED PERSONNEL NEEDS IN OHIO'S ACADEMIC, PUBLIC, SPECIAL AND SCHOOL LIBRARIES

by

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Foreword

Ohio residents interested in pursuing a graduate degree in library and/or information science offered by a program accredited by the American Library Association may choose to attend one of the following: 1) the Kent State University program, 2) the Case Western Reserve University program, or 3) an out-of-state program. Both Ohio, ALA accredited programs are currently located in the northeastern part of the state. Residents in northwestern, central, and southern portions of Ohio are therefore confronted with problems of long commuting distances, high costs of out-of-state tuition at out-of-state programs, separation from families, or indefinite postponement of graduate degrees.

In an attempt to reduce some of these problems, the Kent State University School of Library Science, with the support of the Public Library of Columbus and Franklin County, initiated an extension program in 1975 to serve the Columbus and central Ohio region. In 1978 facilities at The Ohio State University were made available to the Columbus program, through an expanded cooperative agreement. In 1980 a part-time coordinator was hired on a trial basis for the Columbus program, with office space in the main library at The Ohio State University.

The continuation of the off-campus program, in part, depends on the continued demand for graduate library science training in the Columbus and central Ohio area. Rather than limiting a needs assessment to the Columbus area, the School of Library Science at Kent State University sought and received LSCA Title III funding from The State Library of Ohio to conduct a state-wide needs assessment and to evaluate alternative programming to meet identified needs throughout the state.

The needs assessment phase of the project consisted of the following parts:

1. A survey of previous and predicted personnel needs in Ohio academic, public, special and school libraries,
2. A survey of library associates employed in Ohio academic, public and special libraries to determine their interest in graduate programs in librarianship,
3. A survey of certified librarians in Ohio public schools to determine their interest in graduate programs,
4. A survey of undergraduates enrolled in educational media and library science courses in Ohio to determine their interest in graduate programs,
5. A survey of student assistants employed at Ohio academic libraries to determine their interest in graduate programs,
6. A study of advertisements for professional vacancies at Ohio academic, public, special libraries and other agencies posted between 1976 and October 1980, and
7. A review of previous studies on national and state employment trends, placement patterns, enrollment forecasts, etc.

The report which follows is a result of one of these studies.

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A Survey of Projected Personnel Needs in Ohio's Academic, Public, Special and School Libraries

Background

In 1967 a state of crisis was declared by the American library profession [1]. Research indicated that 100,000 additional professional librarians were needed in the United States to meet minimum staff levels required for delivery of quality library service [2]. In Ohio an analysis of library personnel levels echoed national findings and called for increased recruitment and program expansion by Ohio graduate library schools [3]. A decade later the number of professional librarians employed in U.S. academic, public, and school libraries had nearly doubled, jumping from 64,300 to 122,300 [4]. The number of graduate library programs accredited by the American Library Association had also nearly doubled, yet a second inventory of national library needs reported a "shortage" of 119,000 professionals still existed [5].

The library community has since recognized that these estimates of need were greatly inflated, due in part to the underutilization of professionals through non-professional assignments but principally due to the quality assurance approach employed by the national inventories. Evaluation of existing staffing patterns and levels against ideal professional standards does not yield realistic data on employment opportunities, especially during periods of inflation, budget cutbacks and declining undergraduate enrollment. Consequently while new library schools were established in response to the publicized shortage, their graduates wondered where these 119,000 vacancies were located.

Since 1975 and earlier, the job market for librarians has been termed "a buyer's market" [6, p.360]. New graduates with geographic mobility have had the most success securing employment. Hardest to place have been those graduates with advanced degrees who lack pre-professional experience [7]. Associated with a tightening market was a decline in library school enrollments. In 1974, the average number of graduates per library school was 123; this dropped to 102 by 1976 and to 84 by 1979 [8]. Even though fewer beginning librarians were in the job market by 1979, a year-in-review article still reported "the library job market did not open up in 1980, and prospects look grim for any significant improvements in the decade ahead." [9, p.120]

Predictive studies support these conclusions. In a 1972 study of library personnel supply and demand, the Bureau of Labor Statistics (BLS) predicted that the main source of employment between 1970 and 1985 would be due to replacement and not expansion. The BLS report estimated that 11,200 professional positions would open each year between 1970 and 1985, 80% of these being filled by recent graduates of bachelor and master degree programs in library science. BLS estimated an entry rate of 80% for new graduates, creating a pool of approximately 9,000 beginning librarians each year. The BLS report therefore concluded that few positions (i.e., 2,200) would be available for re-entry, job transfers, etc. [10].

More recent assessments have indicated that the number of new graduates and re-entrants to the field will probably exceed the number of openings, with a competitive job market continuing through the 1980's [11]. Slower growth has been predicted for public libraries, especially due to the increasing reliance on support staff and volunteers. Growth of professional academic library staff should be non-existent in the next decade due to declining student enrollment. Modest growth for school libraries has been predicted for the 1980's, due to projected increases in elementary level enrollments as the second generation of the post-war baby boom reaches school age. Highest levels of growth have been predicted for special libraries and for the commercial information industry.

The greatest demand is anticipated for the following specialties: community outreach librarians, media/audiovisual specialists, library automation personnel, and administrative and supervisory professionals. While most positions will continue to require a master's degree in library science (MLS) or a master's degree in education (M.Ed.), it is expected that undergraduates in education with media specialization will be competitive with MLS degree holders when seeking school library openings [10, p.40]. This suggests that the modest growth in school library positions might not drastically ease the market for MLS graduates.

Entry-level requirements should also rise due to the increasingly technical nature of jobs in all fields. BLS predicted that new graduates, with their up-to-date training, will be more attractive because of the lower salary levels they can expect. To the extent that experience is preferred, then re-entrants or transfers will have the advantage.

The BLS study suggested several options for library education programs, the most obvious being that schools should curtail expansion if they are concerned about the career satisfaction of their graduates. The BLS study, however, recommended that programs conduct follow-up studies on graduates and re-entrants prior to embarking on programs of expansion or curtailment. If enrollment growth continues, BLS predicted it would occur in non-ALA accredited programs. This could only have an adverse effect on the job market, especially since the majority of openings require an ALA approved degree.

The BLS projections for library personnel supply and demand through 1985 reflected the Ohio situation as well. In 1970 the Ohio Board of Regents commissioned a study of library education and library personnel needs, findings to be used to guide development of the 1971 Master Plan for Higher Education [12, 13]. The study reported that a rough balance of professional openings and new graduates would exist between 1971 and 1975. By 1980 however, there would be an oversupply of graduates which would increase through 1985. These conclusions were based on comparisons of projected degrees awarded and projected professional vacancies through 1985. Even if one employed the more conservative, graduate entry rate of 80% suggested by BLS, an oversupply would still occur. The study indicated that the reverse would hold true for BA level library staff. Not only would the supply of support staff be deficient, but the number of certificated personnel available for school library positions would be inadequate.

The report to the Ohio Board of Regents concluded with the following recommendations regarding new program development.

> With regard to all proposals that come before the Regents, especially proposals which embody endeavors to develop fresh concepts, we urge that due consideration be given to the capability of present programs to carry out the intended missions. Where present programs are unsuited to the proposed tasks, careful scrutiny of the proposal will be called for. We recommend that this scrutiny of new proposals in library science should embody the following criteria:
>
> 1. Desirability of the program in the light of the current and future manpower needs of the library profesion in Ohio ...
>
> 4. Evidence of adequacy in library holdings and facilities (there is a specialized library science literature which is not typically collected in academic libraries) ...
>
> 5. Evidence of willingness to enroll by a sufficient number of students to make the program viable ...

By calling for such an assessment of personnel needs, materials and potential enrollment, the committee clearly sought to avoid errors of commission similar to those made by expanding library education programs in the past. New programs should not be developed if employment needs do not warrant it.

As the Foreward to this report indicated, the Graduate Education for Librarianship in Ohio Project has conducted a series of such needs assessment activities as preliminaries to program development. One of these assessment efforts focused on previous and predicted personnel needs of Ohio libraries and provides the content of this report.

Purpose of the Study

In addition to updating the employment picture for MLS degree holders, as presented by the 1970 Board of Regents' study [13], this study had the following objectives:

A. For public, academic and special libraries

1. To estimate the number of professional and support staff positions that would be filled in Ohio academic, public and special libraries through 1990.
2. To identify emerging trends in professional/support staff ratios in these three library types.
3. To estimate the number of professional vacancies anticipated in the three library types through 1990.
4. To obtain regional breakdowns of these estimates in order to determine areas of greatest need.
5. To identify skills and specialties judged to be in greatest demand through 1990.

B. For school libraries

6. To estimate the number of certificated school librarians that would be employed at each grade level through 1990.
7. To estimate the number of certificated librarians with master's degree in library science or educational media/technology that would be employed through 1990.
8. To estimate the number of certificated librarians with master's degree that would be hired annually through 1990.
9. To obtain regional breakdowns of these estimates to determine areas of greatest need.

These data, along with projections on the number of MLS degrees to be awarded annually by Ohio ALA-accredited programs, were analyzed to evaluate if and where additional library science courses or programs should be offered in Ohio.

Definitions

For purpose of this study, personnel positions were defined in terms of categories used in annual surveys of the Planning, Evaluation and Research Unit of The State Library of Ohio, as follows:

A. For academic, public and special libraries

1. Professional library positions

academic:	The number of professional staff corresponds to the sum of three professional categories reported annually to The State Library of Ohio, namely a) number of chief, deputy, associate, and assistant chief librarians, b) number of all other librarians, and c) number of other professional staff on library budget.
public and special:	The number of professional staff corresponds to the total number (FTE) of librarians, media and audiovisual specialists, etc. holding a graduate degree in any field. Staff with bachelor's degrees or less are not included in this total.

2. Support staff positions

academic:	The number of support staff (FTE) equals the total number of technical, clerical and other supporting staff on library budget, as reported annually to The State Library of Ohio. Maintenance, custodial, and student personnel are not included in the support staff total.
public and special:	The number of support staff (FTE) equals the number of technical, clerical and other staff PLUS THE NUMBER OF LIBRARIANS, MEDIA, AND AUDIOVISUAL SPECIALISTS WITH A BACHELOR'S DEGREE OR LESS. Maintenance and plant operation are not included in this figure.

B. For school libraries

1. Certificated: The number of librarians (FTE) who hold a valid certificate for library science or educational media.

2. With master's degree: The number of certificated librarians (FTE) who hold a master's degree in library science or educational media.

Regional breakdowns employed in this study approximated areas defined by multi-county consortia. Figure 1 illustrates these regions. Table 1 lists the counties comprising each study region.

Methodology

This study replicated the survey procedures utilized in the Ohio Board of Regents' study [12]. A survey questionnaire was sent to a sample of library directors, personnel directors, school superintendents, and district-level coordinators. Annual statistical directories and input documents of the Planning, Evaluation, and Research Unit of The State Library of Ohio provided additional data.

Sample

A cut-off sampling procedure was used. Included in the sample were all academic libraries with a total staff (professional and support) of at least 10 FTE, all special libraries with a total staff of at least 5 FTE, all public libraries with a total staff of at least 10 FTE, and all school districts with either at least 10 certificated school librarians or a school library coordinator. It was assumed that these libraries would be the ones most likely to hire professionals with graduate level degrees (i.e., MLS, MA or M.Ed.). FTE figures were obtained from the 1980 statistical directory for Ohio libraries [14].

This sampling rule resulted in a sample of 42 academic libraries, 84 public libraries, 31 special libraries, and 127 public school districts. The public, academic, and special libraries selected employed approximately 80% of the total professional librarians in Ohio, (excluding librarians employed in schools and non-library settings). School districts selected employed approximately 50% of the total certificated librarians employed in Ohio public school libraries.

After two questionnaire rounds, 79% of the total sample had returned usable forms. Table 2 presents response rates by library type. With the exception of special libraries, all library types exceeded a minimally acceptable response rate of 70% [15, p. 165]. Table 3 presents a regional breakdown of response rates. If response rate indicates interest in alternative education programs, then libraries in the CALICO, MILO, NOLA, OVAL, SOLO, SWORL/GCLC, and WORLDS regions (i.e., principally central and southern Ohio) would presumably participate in any cooperative ventures developed by the Graduate Education for Librarianship in Ohio Project. The validity of this premise was judged in this report and other segments of the needs assessment.

Because response rate was less than 100%, an analysis for non-response bias was performed for each of the four library types. Differencies on main study variables were examined. Tables 4 and 5 contain the results. For public and special libraries there were no differences between respondents and non-respondents on total staff

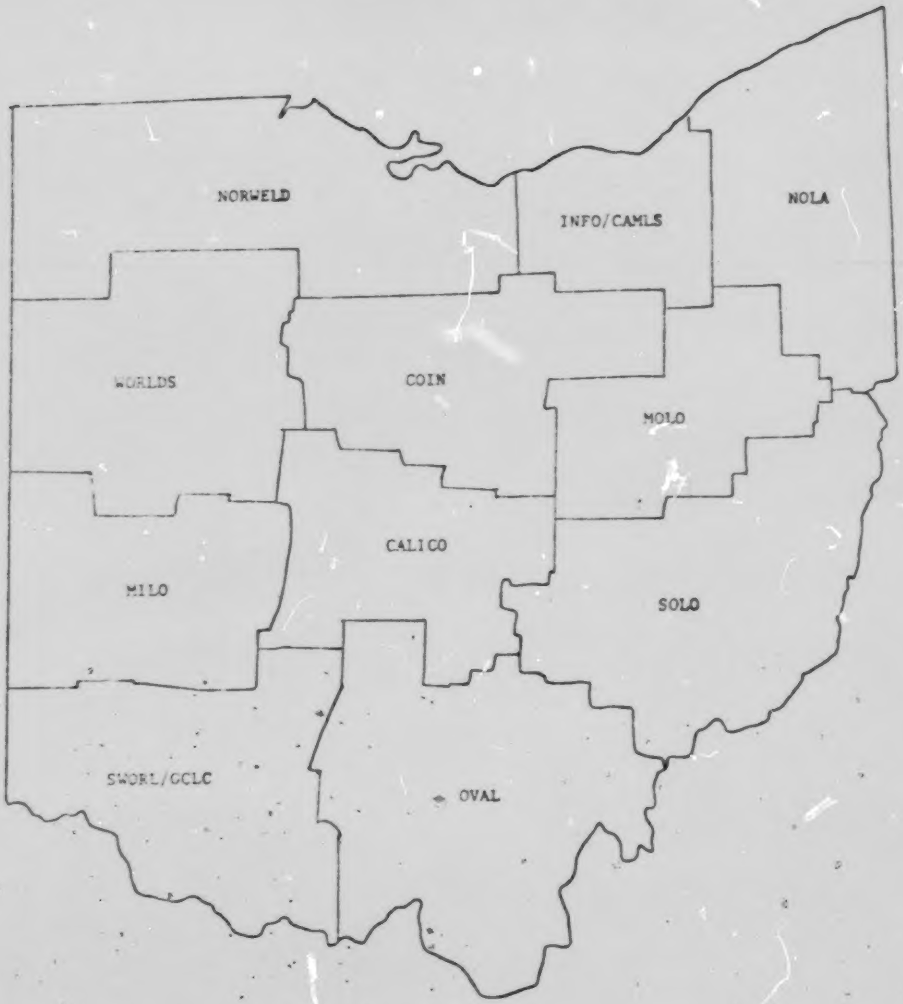
NORWELD
INFO/CAMLS
NOLA
WORLDS
COIN
MOLO
CALICO
MILO
SOLO
SWORL/GCLC
OVAL

Figure 1

A Map of the Eleven Ohio Regions

Table 1

Ohio Counties Comprising Study Regions

- CALICO
  - Delaware
  - Fairfield
  - Franklin
  - Licking
  - Madison
  - Union
- COIN
  - Ashland
  - Crawford
  - Knox
  - Marion
  - Morrow
  - Richland
  - Wayne
  - Wyondot
- MILO
  - Champaign
  - Clark
  - Darke
  - Greene
  - Miami
  - Montgomery
  - Preble
- MOLO
  - Carroll
  - Coschocton
  - Holmes
  - Stark
  - Tuscarawas
- NOLA
  - Ashtabula
  - Columbiana
  - Geauga
  - Lake
  - Mahoning
  - Portage
  - Trumbull
- NORWELD
  - Defiance
  - Erie
  - Fulton
  - Henry
  - Huron
  - Lucas
  - Ottawa
  - Paulding
  - Sandusky
  - Seneca
  - Williams
  - Wood
- OVAL
  - Athens
  - Gallia
  - Hocking
  - Jackson
  - Lawrence
  - Meigs
  - Pickaway
  - Pike
  - Ross
  - Scioto
  - Vinton
- SOLO
  - Belmont
  - Guernsey
  - Harrison
  - Jefferson
  - Monroe
  - Morgan
  - Muskingum
  - Noble
  - Perry
  - Washington
- SWORL
  - Adams
  - Brown
  - Butler
  - Clermont
  - Clinton
  - Fayette
  - Hamilton
  - Highland
  - Warren
- WORLDS
  - Allen
  - Auglaize
  - Hancock
  - Hardin
  - Logan
  - Mercer
  - Putnam
  - Shelby
  - Van Wert

TABLE 2

Response Rate by Library Type

	Sent	Returned	Response Rate
Academic	42	32	76%
Public	84	61	73%
Special	31	21	68%
School	127	110	87%

TABLE 3

Response Rate by Library Type and Region

	Sent	Returned	Response Rate
CALICO			
Academic	5	4	80%*
Public	10	9	90%*
Special	9	5	56%
School	13	10	77%
COIN			
Academic	3	3	100%*
Public	6	4	67%
Special	0	0	--
School	6	5	83%
INFO/CAMLS			
Academic	10	7	70%
Public	16	11	69%
Special	16	10	63%
School	24	20	83%
MILO			
Academic	7	4	57%
Public	7	5	71%
Special	1	1	100%*
School	20	18	90%*
MOLO			
Academic	2	1	50%
Public	7	4	57%
Special	1	1	100%*
School	19	15	79%
NOLA			
Academic	3	3	100%*
Public	11	8	73%
Special	0	0	--
School	16	15	94%*
NORWELD			
Academic	3	2	67%
Public	9	5	56%
Special	0	0	--
School	9	8	89%*
OVAL			
Academic	1	1	100%*
Public	5	4	80%*
Special	1	1	100%*
School	1	1	100%*
SOLO			
Academic	1	1	100%*
Public	4	3	75%*
Special	0	0	--
School	4	3	75%
SWORL			
Academic	6	5	83%*
Public	5	4	80%*
Special	3	3	100%
School	11	11	100%*
WORLDS			
Academic	1	1	100%*
Public	4	4	100%*
Special	0	0	--
School	4	4	100%*

*Indicates above the overall response rate for library type.

Table 4

Mean Differences in Professional Staff Size, Total Staff Size, and Support/Professional Staff Ratio between Responding and Non-responding Libraries[1]

	Respondents Mean	Non-Respondents Mean	Z[2] Statistic	Prob.
Academic Libraries				
Professional Staff	10.7	30.1	1.95	.051
Total Staff	28.9	85.4	1.86	.063
Support/Professional Ratio	1.7	1.8	.58	.565
	(N=32)	(N=10)		
Public Libraries				
Professional Staff	13.0	12.5	.38	.707
Total Staff	50.4	55.5	.60	.547
Support/Professional Ratio	5.5	6.9	.62	.536
	(N=61)	(N=23)		
Special Libraries				
Professional Staff	3.4	2.4	1.08	.281
Total Staff	11.4	9.6	.40	.689
Support/Professional Ratio	2.4	2.9	.99	.321
	(N=21)	(N=10)		

---

[1] Analysis uses 1979 data from Statistics of Ohio Libraries, 1980 edition.

[2] The Z statistic reported is the normal approximation of the non-parametric Wilcoxon two-sample test of mean rank differences used for large samples. Absolute values are reported.

Table 5
Mean Differences between Responding and Non-responding School Districts on Number of Certificated School Librarians, Certificated School Librarians with Master's, and Percentage of Certificated School Librarians with Master's: By Grade Level*

	Respondent Mean	Non-Respondents Mean	Z** Statistic	Prob.
Elementary School				
Certificated	4.1	11.5	.09	.921
w/Master's	1.9	4.0	.87	.385
Percent w/Master's	48.%	25.%	1.64	.100
Middle School				
Certificated	1.3	0.4	.53	.599
w/Master's	0.6	0.2	1.19	.233
Percent w/Master's	45.%	20.%	1.11	.268
Junior High School				
Certificated	2.6	5.3	.44	.659
w/Master's	1.2	2.6	.44	.659
Percent w/Master's	46.%	52.%	.40	.688
Senior High School				
Certificated	2.4	3.9	.03	.974
w/Master's	1.5	2.5	.93	.355
Percent w/Master's	60.%	66.%	.31	.760
All Schools				
Certificated	8.6	18.3	.53	.597
w/Master's	4.4	7.8	.00	.997
Percent w/Master's	51.%	42.%	.95	.344

*Analysis uses 1979 data reported in Statistics of Ohio Libraries, 1980 edition.

**The Z statistic reported is the normal approximation of the non-parametric Wilcoxon two-sample test of mean rank differences used for large samples. Absolute values are reported.

size, professional staff size, or support/professional staff ratios. Academic libraries that responded also had similar support/professional staff ratios as those libraries failing to respond. Since significance tests on professional and total staff size differences among academic libraries approached the established criterion ($p \leq .05$), it was concluded that non-responding academic libraries tended to be larger in terms of professional, and hence total staff size. This fact was considered in the analysis and discussion of academic library data.

Table 5 presents the non-response analysis for school districts. Responding and non-responding districts had similar numbers of certificated librarians and certificated librarians with master's degrees across all grade levels. The proportion of certificated librarians having master's degrees was also similar for the two groups. It was concluded therefore that responding public, special and school libraries were representative while findings on academic libraries might not adequately reflect future personnel trends for larger institutions.

Data Collection Procedures

Survey questionnaires were sent to personnel directors, library directors, superintendents and district-level coordinators. Appendices A and B contain the cover letters, questionnaires, instruction sheets and follow-up letters sent to public, academic and special libraries (hereafter referred to as PAS) and to school districts. PAS recipients were asked to predict the number of professional positions and support positions that their libraries would be able to fill annually through 1985. An estimate of annual average positions filled was requested for the period 1986-1990. To permit an examination of trends and also to provide a starting point for predictions, data from existing statistical directories and input documents were recorded on each questionnaire, indicating the number of professional and support positions reported by each sampled library between 1976 and 1979. Verification of previously reported data was also requested.

The PAS libraries were also requested to report the number of professional librarians hired each year for the period 1976-1979 and to estimate the number of professional hirings through 1985. Again an average figure was requested for the period 1986-1990. Finally PAS forms provided space for information on trends in number of applications per vacancy and on anticipated specialty needs.

The school library form required similar predictions through 1990. Coordinators or superintendents were asked to estimate the number of certificated positions that would be filled through 1985, with an average annual estimate for the period 1986-90. Estimates of the number of certificated positions filled by librarians with master degrees in library science or educational media/technology were also requested for the same periods. Personnel needs were categorized by building level, i.e., elementary, middle, junior high, and senior high schools. Data from 1979 computer-printouts supplied by the Ohio Department of Education, Division of Computer Services, were recorded on each form to provide a starting point. 1976-78 data were unavailable. As with the PAS sample, estimates of annual hirings for each period were requested, estimates being restricted to the number of positions filled by MLS and M.Ed. degree holders.

Surveys were mailed in mid-October with follow-up forms sent in early November. Any forms received after December 5, 1980 were excluded from analysis.

Data Analysis

With the exception of non-parametric procedures employed for non-response bias analysis, statistical analysis was restricted to computation of simple descriptive statistics. The number of sampled libraries providing data for each computation varied. This information and adjustment procedures for missing data are given below:

PAS computations

1. 1976-1979 totals for professional and support staff positions: Based on total sample (i.e., respondents and non-respondents); missing data estimated by figures from preceding year.

2. 1980-85 totals for professional and support staff positions: Based on data reported by responding libraries; missing data estimated by figures from preceding year; totals adjusted for non-response by adding 1979 data on non-respondents as constant.

3. Support/professional staff ratios: Means based on responding libraries only.

4. Growth rates: Based on average percent change in personnel totals as computed in 1 + 2 above.

5. Annual hiring estimates: Average percentage of total staff hired each year computed from respondents' data; resulting percentages used to estimate hires using totals computed in 1 + 2 above.

School computations

1-5. Same as above except estimates reflect certificated and certificated - with - master's - degree personnel.

Results

In this section, results from the public, academic, and special library survey are presented first, followed by school library findings. Implications for development of graduate programs in library and information science are discussed in the concluding section.

1. Public, Academic, and Special Libraries

Previous Trends, 1976-1979

Table 6 reports sample totals for the period 1976-1979 by library type. Regional breakdowns appear in Appendix C. Between 1976 and 1979 sampled public, academic, and special libraries experienced increases in professional staff size. Public libraries showed the most consistent growth while academic and special libraries fluctuated from year to year. Similar degrees of stability existed in support staff size, public libraries declining in number of support staff, academic libraries fluctuating in a positive growth direction, and special libraries demonstrating no particular trend.

Anticipated Growth through 1990

Table 7 reports estimated totals through 1985. Table 8 presents average annual estimates for the period 1986-1990. Clearer trends emerge for the future. Public libraries foresee continued growth in professional staff through 1990, with special libraries showing only a slight increase. Academic libraries, on the other hand, predict a decline in the number of professional positions available through 1985, with a sharp increase for the following period 1986-1990. This reduction in academic professional staff size reflects declining student enrollment forecasts for the 1980's. However it is unknown if clearer trends might have appeared if predictions had also been available for the larger, non-responding academic libraries. Recall that figures in Table 7 and 8 reflect staff shifts estimated by responding libraries with 1979 data on non-respondents added to each total as a constant.

Tables 7 and 8 also present support staff predictions. All three library types expert continued growth in support staff through 1990, perhaps confirming the Bureau of Labor Statistics report which pointed to increasing reliance on support staff [10]. To examine this trend more closely, average support/professional staff ratios were computed for each library type. Table 9 contains these data.

Contrary to expectations, libraries anticipated that support/professional staff ratios should remain fairly stable through the next decade. Public libraries predict a slower increase in the number of support positions compared to professional positions through 1985, with little change in the ratio for the next five years. It should be noted

Table 6

Total Professional and Support Staff by Library Type, 1976-79*

LIBRARY TYPE	YEAR			
	1976	1977	1978	1979
Public (N=84)				
Professional	1,021	1,040	1,041	1,083
Support	3,392	3,364	3,178	3,268
Academic (N=42)				
Professional	617	594	610	644
Support	1,128	1,075	1,117	1,134
Special (N=31)				
Professional	89	115	86	96
Support	260	209	248	239

*See Appendix C for regional breakdowns.

Table 7

Estimated Professional and Support Staff Totals by Library Type, 1980-1985*

LIBRARY TYPE	1980	1981	1982	1983	1984	1985
Public						
Professional	1,084	1,103	1,124	1,141	1,155	1,186
Support	3,150	3,179	3,194	3,210	3,225	3,249
Academic						
Professional	666	660	666	672	678	658
Support	1,115	1,109	1,120	1,124	1,133	1,138
Special						
Professional	97	101	105	105	110	108
Support	256	260	265	270	273	276

*Sampled libraries reflect 80% of total library professionals in Ohio. These figures therefore underestimate total employment.

Table 8

Estimated Total Professional and Support Staff by Library Type, 1986-90*

LIBRARY TYPE	Average Annual Staff Size for Period 1986-90
Public	
Professional	1,208
Support	3,279
Academic	
Professional	687
Support	1,152
Special	
Professional	111
Support	277

*Sampled libraries reflect 80% of total library professionals in Ohio. These figures therefore underestimate total employment.

Table 9

Average Support/Professional Staff Ratios at Academic, Special, and Public Libraries*

	PERIOD		
LIBRARY TYPE	1976-79	1980-85	1986-1990
Public	3.2	2.8	2.7
Academic	1.8	1.7	1.7
Special	2.5	1.6	2.5

*Data are the number of support staff per professional librarian.

that public and special libraries should exceed the 2:1 ratio set as a standard in the National Inventory of Library Needs [5]. Academic libraries continue to fall short.

The preceding tables have indicated general increases or decreases in staff size. To determine the degree of change for each of the periods studied, annual average growth rates were computed. Table 10 provides a regional breakdown of change for public libraries; Table 11, for academic libraries, and Table 12, for special libraries. Detailed statistics for each region are reported in Appendices D and E.

In general public libraries anticipate a slowing trend, slowing trend, dropping from an average 2.0% growth in professional staff each year between 1976 and 1979, to a 1.7% yearly growth the following decade. Support staff, however, experienced little or negative growth from 1976 to 1979. By 1986-90, an average annual growth rate of .9% is expected. So while more support staff should be hired, the professional staff should increase at a faster rate, according to responding libraries.

Table 10 indicates that INFO/CAMLS libraries, which employed about 31% of Ohio public professional libraries in 1979 [See Appendix F], anticipated little or no expansion in professional or support staff through 1990. CALICO libraries which employed approximately 11% of Ohio public professional librarians in 1979, still expected substantial annual growth in professional staff through 1985 (7.2%). The only other regions consistently above the state averages for 1980-1990 were MILO, NOLA, and WORLDS.

As seen in Table 11, academic libraries on the average experienced less professional staff growth for the period 1976-79 than did public libraries (1.5% vs 2.0%). This continued to be true for the period 1980-85 (-.2% vs 1.8%). As the estimated totals indicated earlier, academic libraries believe a sharp increase increase in annual growth will occur after 1986 (4.4% annual average). Although INFO/CAMLS and CALICO had the highest regional percentage of academic libraries in 1979 [See Appendix F], the professional staff expansion predicted for 1986-1990 appears to be scheduled for the OVAL (9.1%) and SOLO (25%) regions. NOLA academic libraries predicted an above average rate of 3.3% for 1986-90. These three regions, however, had 100% response rates for academic libraries, while areas employing larger institutions (i.e., SWORL/GCLC, INFO/CAMLS, and CALICO) had lower rates (i.e., 83%, 70%, and 80% respectively). Regional breakdowns of total academic expansion are probably not as accurate as other PAS breakdowns.

For special libraries, Table 12 shows a drastic decline in professional staff growth is predicted this decade, a drop from 38.4% to 2.2%. Trends for support staff are unclear. The greatest average growth in both professional and support staff should occur in special libraries in the MILO and SWORL/GCLC regions. It should be noted that the growth rate expected for professional staff in special libraries

Table 10

Regional Breakdown of Annual Average Growth Rates: Public Library Professional and Support Staff

	GROWTH PERIODS		
REGION	1976-79	1980-85	1986-90
CALICO			
Professional	12.4%	7.2%	1.8%
Support	1.1%	1.9%	3.4%
COIN			
Professional	2.8%	1.4%	-0.3%
Support	3.8%	0.8%	0.0%
INFO/CAMLS			
Professional	-1.5%	-0.5%	0.6%
Support	-2.7%	-0.3%	-1.1%
MILO			
Professional	4.1%	2.0%	2.1%
Support	0.5%	0.2%	0.3%
MOLO			
Professional	3.4%	4.1%	0.0%
Support	-5.5%	0.1%	0.5%
NOLA			
Professional	7.3%	2.1%	2.8%
Support	3.2%	1.4%	2.2%
NORWELD			
Professional	4.4%	1.0%	1.8%
Support	2.3%	0.4%	0.6%
OVAL			
Professional	-4.0%	16.7%	0.0%
Support	-5.0%	0.6%	-1.4%
SOLO			
Professional	6.0%	9.0%	0.0%
Support	1.4%	1.3%	0.0%
SWORL/GLCL			
Professional	-0.2%	1.5%	3.3%
Support	-1.5%	1.3%	4.2%

Table 10 (cont'd)

WORLDS			
Professional	10.5%	5.5%	11.1%
Support	-1.9%	2.0%	1.1%
STATE-AVERAGE			
Professional	2.0%	1.8%	1.7%
Support	-1.2%	0.6%	0.9%

Table 11

Regional Breakdown of
Annual Average Growth Rates:
Academic Library Professional and Support Staff

REGION	GROWTH PERIODS 1976-79	 1980-85	 1986-90
CALICO			
Professional	1.0%	0.2%	-4.9%
Support	1.0%	0.2%	0.0%
COIN			
Professional	-5.9%	1.3%	5.9%
Support	5.5%	0.7%	3.6%
INFO/CAMLS			
Professional	1.6%	0.5%	1.1%
Support	1.7%	1.6%	0.0%
MILO			
Professional	2.7%	-3.4%	1.5%
Support	1.0%	0.0%	2.0%
MOLO			
Professional	-5.5%	0.3%	0.0%
Support	-7.0%	0.0%	0.0%
NOLA			
Professional	8.9%	3.7%	3.3%
Support	1.6%	2.3%	3.3%
NORWELD			
Professional	-7.0%	1.5%	0.0%
Support	-6.3%	0.2%	0.0%
OVAL			
Professional	3.8%	3.4%	9.1%
Support	0.6%	2.4%	6.4%
SOLO			
Professional	-8.3%	6.7%	25.0%
Support	0.4%	-2.2%	12.5%

Table 11, continued

SWORL/GCLC			
Professional	1.7%	1.1%	1.8%
Support	5.1%	0.5%	1.8%
WORLDS			
Professional	0.0%	0.0%	0.0%
Support	0.0%	0.0%	0.0%
STATE AVERAGE			
Professional	1.5%	-0.2%	4.4%
Support	0.2%	0.5%	1.2%

Table 12

Regional Breakdown of Annual Average Growth Rates: Special Library Professional and Support Staff

	GROWTH PERIODS		
REGION	1976-79	1980-85	1986-1990
CALICO			
Prof.	-4.9%	2.6%	0.0%
Supt.	-4.1%	0.7%	0.7%
INFO/CAMLS			
Prof.	9.5%	0.8%	1.6%
Supt.	0.7%	1.5%	-1.8%
MILO			
Prof.	0.0%	16.6%	25.0%
Supt.	22.2%	13.2%	11.1%
MOLO			
Prof.	77.0%	0.0%	0.0%
Supt.	11.1%	4.0%	0.0%
OVAL			
Prof.	0.0%	100.0%	0.0%
Supt.	-5.8%	5.0%	0.0%
SWORL/GCLC			
Prof.	80.0%	2.2%	10.0%
Supt.	116.2%	2.5%	5.5%
STATE AVERAGE			
Prof.	38.4%	2.2%	2.2%
Supt.	-1.5%	1.1%	.2%

exceeds that of public libraries for the next decade (2.2% vs 1.8%). Of course when translated into number of new positions, public libraries exceed special libraries in actual expansion.

Table 13 summarizes the total number of professional library positions to be filled through 1990. Conservative and liberal estimates have been given. Conservative estimates reflect respondents' predictions with a non-respondent constant being added. Liberal estimates have adjusted totals by calculating predicted growth for non-respondents using state growth rates for the specific library type. Since significance tests detected no differences between responding and non-responding public and special libraries, the growth patterns were assumed to hold for non-respondents as well. The adjustments for academic non-respondents may actually be underestimates since greatest growth in absolute numbers would probably occur in the larger libraries. In fact all totals are underestimates since the sample represented approximately 80% of the total professional population in Ohio PAS libraries. It should also be noted that 1990 figures are based on average annual number of positions predicted for the 1986-90 period.

According to adjusted figures in Table 13, by 1985 there should be approximately 1,980 professional and 4,720 support personnel employed in Ohio PAS libraries. The majority of the professionals will be located in public libraries (1,220) with approximately 660 academic libraries, about 110 will be employed in special libraries. By 1990 at least 2,050 professional and 4,780 support personnel will be working in Ohio PAS libraries. The breakdown of professional staff is expected to be roughly 1,245 public, 700 academic, and 115 special.

Number of positions filled and number of positions available for MLS graduates, re-entrants, or transfers are not synonymous. Predictions on number of vacancies due to expansion, retirement, and replacement are discussed next.

Annual Professional Vacancies Anticipated in PAS Libraries

Tables 14 to 16 report regional breakdowns for past and predicted professional hirings in each PAS library type. The reader is cautioned that figures reflect respondent data only. Estimates for 1986-90 are omitted due to the number of libraries refusing to predict hires past 1985.

For responding public libraries, Table 14 indicates most new positions should open in the CALICO region in the next five years. Fifty-seven (57) professional additions are predicted; this averages out to between 10 and 11 jobs per year for the respondents in the CALICO area. The INFO/CAMLS public libraries anticipate few new positions.

The picture changes when replacement needs are considered. INFO/CAMLS libraries anticipate having the highest percentage of public library positions for 1980-85 (31%), while CALICO public libraries expect

Table 13

Total Professional and Support Staff By Library Type: 1979, 1985, and 1990

	Unadjusted*			Adjusted+	
Type	1979	1985	1990	1985	1990
Public					
Prof.	1,083	1,186	1,206	1,217	1,243
Supt.	3,268	3,249	3,279	3,285	3,324
Academic					
Prof.	644	658	687	654	696
Supt.	1,134	1,138	1,152	1,155	1,175
Special					
Prof.	96	108	111	111	114
Supt.	239	276	277	281	281
Total					
Prof.	1,823	1,952	2,004	1,982	2,053
Supt.	4,641	4,663	4,708	4,721	4,780

*These totals include the 1979 data for non-responding libraries plus the predicted staff size of responding libraries. Totals are therefore conservative estimates for sampled libraries (80%).

+These totals include the 1979 data for non-responding libraries, adjusted by growth rates for each period, plus the predicted staff sizes of responding libraries. Totals may therefore be more liberal estimates for sampled libraries (80%).

Table 14

Regional Breakdown of Past and Predicted Professional Hirings Due to Expansion, Replacements, and Retirements, 1976-1985

PUBLIC LIBRARIES

REGION	Hirings Due to Expansion				Total Number of Hires			
	1976-79		1980-85		1976-79		1980-85	
	Actual No.	(%)	Actual No.	(%)	Actual No.	(%)	Actual No.	(%)
CALICO	38.5	(36.6)	57	(48.2)	65.8	(29.6)	88.8	(28.5)
COIN	2.5	(2.4)	2.3	(2.0)	8.2	(3.7)	16.0	(5.1)
INFO/CAMLS	8.1	(7.7)	5.0	(4.2)	80.0	(36.0)	95.5	(30.6)
MILO	8.0	(7.6)	5.0	(4.2)	19.1	(8.5)	26.0	(8.3)
MOLO	2.7	(2.6)	6.0	(5.1)	3.0	(1.4)	12.0	(3.8)
NOLA	18.2	(17.3)	10.7	(9.1)	18.0	(8.1)	22.0	(7.0)
NORWELD	11.5	(11.0)	4.2	(3.6)	11.0	(4.9)	8.5	(2.7)
OVAL	1.0	(1.0)	5.0	(4.2)	3.0	(1.4)	5.0	(1.6)
SOLO	1.5	(1.4)	5.0	(4.2)	1.0	(0.4)	0.0	(0.0)
SWORL/GCLC	9.0	(8.6)	11.0	(9.3)	6.5	(2.9)	33.0	(10.5)
WORLDS	4.0	(3.8)	7.0	(5.9)	7.0	(3.1)	6.0	(1.9)
	105	(100%)	118.2	(100%)	222.6	(100%)	312.8	(100%)

approximately 29% of the openings will occur in central Ohio. Respondents, however, predict only 313 professional public librarians will be hired during the five year period. This averages out to approximately 63 per year.

Table 15 reports that most academic positions available due to expansion in the 1980-85 period will be located in the NORWELD, SWORL/GCLC, and MOLO areas. Still only 38 positions should be added for the entire five years by responding libraries. INFO/CAMLS academic libraries, based on predictions of responding libraries, should have the highest percentage of total professional openings (42%). Again only 120 professionals are expected to be hired for the five years, averaging out to 24 per year.

Table 16 indicates that most positions available due to expansion and/or replacement will appear in INFO/CAMLS and CALICO special libraries. Only 3 new positions are expected each year, with approximately 6 vacancies occurring annually for the 1980-85 period.

Because these estimates were based on respondent data only, it was decided to calculate annual rates of hire among respondents and to calculate total sample hires using these rates. In this way a more accurate count of total annual vacancies could be obtained for each reporting period.

Table 17 presents avarage hire rates for each reporting period. Special libraries fluctuate little over the three periods, the hire rate varying between 7.1% and 7.6%. Public and academic libraries predicted lower hire rates for 1980-85 compared to 1976-79, with an increase for 1986-90. 1986-90 rates were predicted to remain below 1976-79 rates of hire for all three library types.

Table 18 reports the estimated number of vacancies for the state in 1985 and 1990. Again 1990 figures are based on average totals for the period 1986-90. Rounding to the closest ten, by 1985 140 positions should be available in PAS libraries each year; 160 positions annually, by 1990. If one were to adjust for the .8:1 sample/population ratio, these liberal estimates would be 175 and 200 positions by 1985 and 1990 respectively.

The conclusion of this report summarizes PAS findings and compares projected supply with demand.

Other PAS Findings

Surveyed libraries also shared perceptions on changes in job application rate and specialty areas in greatest need in the decade to come. As shown in Table 19, approximately 56% of the responding libraries felt more applications were being submitted for professional vacancies as compared to five years ago. This was especially true for public libraries, 61% of which noted an increase.

Table 15

Regional Breakdown of Past and Predicted Professional Hirings Due to Expansion, Replacements, and Retirements, 1976-1985

ACADEMIC LIBRARIES

REGION	Hirings Due to Expansion				Total Number of Hires			
	1976-79		1980-85		1976-79		1980-85	
	Actual No.	(%)	Actual No.	(%)	Actual No.	(%)	Actual No.	(%)
CALICO	15	(14.6)	1.0	(2.7)	4.0	(3.7)	10.0	(8.4)
COIN	0	(0.0)	1.0	(2.7)	2.0	(1.8)	4.0	(3.4)
INFO/CAMLS	34	(33.0)	4.5	(12.0)	39.0	(36.1)	50.0	(41.8)
MILO	12	(11.7)	2.0	(5.3)	14.0	(13.0)	6.0	(5.0)
MOLO	0	(0.0)	6.0	(16.0)	0.0	(0.0)	2.0	(1.7)
NOLA	1	(0.9)	5.0	(13.3)	11.0	(10.2)	9.0	(7.5)
NORWELD	34	(33.0)	6.0	(16.0)	6.0	(5.6)	9.0	(7.5)
OVAL	2	(1.9)	5.0	(13.3)	6.0	(5.6)	11.0	(9.2)
SOLO	0	(0.0)	1.0	(2.7)	0.0	(0.0)	3.0	(2.5)
SWORL/GCLC	5	(4.9)	6.0	(16.0)	24.0	(22.2)	15.5	(13.0)
WORLDS	0	(0.0)	0.0	(0.0)	2.0	(1.8)	0.0	(0.0)
	103	(100%)	57.5	(100%)	108	(100%)	119.5	(100%)

Table 16

Regional Breakdown of Past and Predicted Professional Hirings Due to Expansion, Replacements, and Retirements, 1976-1985

SPECIAL LIBRARIES

	Hirings Due to Expansion				Total Number of Hires			
REGION	1976-79		1980-85		1976-79		1980-85	
	Actual No.	(%)	Actual No.	(%)	Actual No.	(%)	Actual No.	(%)
CALICO	1.3	(4.2)	4.7	(30.9)	7.0	(41.2)	14.0	(43.7)
INFO/CAMLS	19.0	(61.7)	7.0	(46.0)	9.0	(52.9)	14.5	(45.3)
MILO	0.0	(0.0)	2.0	(13.2)	0.0	(0.0)	2.0	(6.3)
MOLO	3.0	(9.7)	0.0	(0.0)	1.0	(5.9)	0.0	(0.0)
OVAL	0.0	(0.0)	1.0	(6.6)	0.0	(0.0)	1.0	(3.1)
SWORL/GCLC	7.5	(24.4)	.5	(3.3)	0.0	(0.0)	.5	(1.6)
	30.8	(100%)	15.2	(100%)	17.0	(100%)	32	(100%)

Table 17

Average Percentage of Total Professional Staff Hired Annually By Each Library Type*

	PERIOD		
LIBRARY TYPE	1976-79	1989-85	1986-90
Public Libraries	8.6%	6.6%	7.5%
Special Libraries	7.3%	7.6%	7.1%
Academic Libraries	9.3%	7.5%	8.1%

*These percentages are ratios of number of hires reported annually by responding libraries to total staff size in responding libraries. These are conservative estimates since not all responding libraries reported annual number of professionals hired.

Table 18

Estimated Total Annual Professional Vacancies
by Library Type

		Unadjusted*		Adjusted+	
LIBRARY TYPE	1979	1985	1990	1985	1990
Public Libraries	93	78	90	80	93
Academic Libraries	59	49	56	49	56
Special Libraries	7	8	8	8	8
Total	159	135	154	137	157

*Estimated number of vacancies are calculated using respective percentages in Table 17 with conservative totals in Table 13. Again totals are for sampled libraries (80%).

+Estimated number of vacancies are calculated using respective percentages in Table 17 with liberal totals in Table 13. Again totals are for sampled libraries (80%).

TABLE 19

Number of Applicants Per Vacancy in Ohio Libraries

	Increased	Same	Decreased
Overall (N=110)	55.5%	29.0%	15.5%
Academic (N=31)	45.2%	32.3%	22.5%
Public (N=59)	61.0%	25.4%	13.6%
Special (N=20)	55.0%	35.0%	10.0%

Appendix G contains a regional breakdown of information reported in Table 19. If one defines a less competitive job area as one with 50% or more libraries reporting stable or declining application rates, then a glance at Appendix G suggests that CALICO, MOLO, OVAL, SOLO and WORLDS libraries offer positions attracting the same or fewer applicants as five years ago. On the other hand, competition seems to be increasing in the COIN, INFO/CAMLS, MILO, NOLA, NORWELD and SWORL/GCLC areas.

Public, academic, and special libraries submitted lists of areas for which professionals would be in greatest demand. Areas of least need were also enumerated.

Public libraries (N = 61) reported the following areas: (The numbers in parentheses are the number of libraries listing an area).

Greatest need

1.	computer/automation specialist	(18)
2.	reference personnel	(17)
3.	audio-visual specialist	(14)
4.	administrative/management specialist	(11)
5.	children's services	(8)
6.	on-line searcher of bibliographic data bases	(7)
7.	extension/outreach specialist	(7)
8.	cataloging personnel	(7)
9.	adult services/adult programming specialist	(6)
10.	"book people"	(4)
11.	public relations specialist	(3)
12.	inner city librarians	(2)
13.	rural librarians	(1)
14.	reader's advisor	(1)
15.	archivist	(1)
16.	inter-library loan specialist	(1)
17.	institutional librarian	(1)

Least needed

1.	cataloging	(15)
2.	young adult/children's services	(5)
3.	technical services	(3)
4.	archives/special collections/rare books	(2)
5.	audio-visual librarian	(2)
6.	computer specialist	(2)
7.	reference personnel	(2)
8.	outreach programmer	(1)
9.	language specialist	(1)

Academic libraries, 31 of which returned questionnaires, prioritized needs as follows:

Greatest need

1.	computer/automation specialist	(16)
2.	on-line searching personnel	(7)
3.	reference personnel	(6)
4.	bibliographic instruction/user education	(4)
5.	administrative/management personnel	(4)
6.	subject specialists	(4)
7.	systems management	(4)
8.	science librarians	(4)
9.	medical librarians	(3)
10.	law librarians	(2)
11.	technical services	(2)
12.	archives/rare books/special collections librarians	(2)
13.	research analysts (statistics, grantsmanship)	(2)

Least needed

1.	cataloging	(7)
2.	acquisitions	(2)
3.	circulation	(2)
4.	humanities/social science subject specialists	(2)
5.	indexer	(1)
6.	generalist	(1)
7.	non-experienced librarians	(1)

The twenty (20) responding special libraries specified the following areas of need:

Greatest need

1.	computerized data base searching	(14)
2.	data processing/computer skills	(6)
3.	chemistry/science background	(6)
4.	information specialists	(4)
5.	instructional technology/audiovisual specialist	(3)
6.	cataloging	(2)
7.	reference	(2)
8.	medical librarianship	(2)
9.	language skills	(2)
10.	acquisitions	(2)
11.	government documents specialist	(2)
12.	business background	(2)
13.	thesaurus construction	(1)
14.	special collections	(1)
15.	law librarian	(1)
16.	materials conservation/preservation specialist	(1)

Least needed

1.	cataloging	(4)
2.	humanities background	(3)
3.	technical services	(1)
4.	acquisitions	(1)
5.	public service	(1)
6.	user education	(1)
7.	periodical librarian	(1)
8.	bibliographer	(1)
9.	inter-library loan	(1)
10.	MLS degree holder	(1)

In general, all three library types recognized the application of computer technology to library functions requires personnel trained in both fields. Administrative skills, familiarity with on-line searching of data bases, and audiovisual training were also mentioned by at least two of the three library types. Specialty areas continue to be in demand in academic and special libraries (e.g., law, medicine, etc.). Public libraries echoed areas of need outlined in the BLS study [10], e.g., automation, outreach, management, children's services.

"Least needed" lists consistently included cataloging, technical services, acquisitions, circulation - all areas where the impact of computer innovations will most readily be felt.

2. School Libraries

Previous Trends, 1976-79

Because detailed statistics were unavailable on individual school districts for the period 1976-79, county data from annual statistical directories were aggregated to provide the regional breakdowns reported in Table 20. These figures therefore represent the total population of Ohio certificated school librarians, not the survey sample.

The state totals in Table 20 show a steady increase in the number of certificated school librarians holding a master's degree in library science or educational media/technology. In 1976, Ohio public schools employed 915 MLS/M.ED. librarians. By 1979 this had jumped to 1,199. The total number of certificated librarians drastically increased from 1,955 to 2,943, an increase of approximately 50%.

It is believed that pre-1980 data have questionable reliability. Individuals reporting on the number of certificated librarians in their building have often counted personnel shared with as many as three other buildings as being full-time members of building staff. This inflates the actual number of certificated librarians. Since individuals completing annual report forms may differ from year to year, it is impossible to know if fluctuations result from actual changes in staff size or from variations in adhering to report form instructions.

Table 20

Regional Totals: Certificated Librarians and Certificated Librarians with Master's Degree, 1976-1979*

REGION	YEAR			
	1976	1977	1978	1979
CALICO				
Certificated	233	327	341	335
w/Master's	83	111	124	129
COIN				
Certificated	97	127	136	141
w/Master's	36	46	46	49
INFO/CAMLS				
Certificated	516	601	594	618
w/Master's	299	337	365	347
MILO				
Certificated	203	249	197	237
w/Master's	73	77	78	106
MOLO				
Certificated	69	140	132	143
w/Master's	48	62	58	67
NOLA				
Certificated	186	282	275	309
w/Master's	94	102	116	112
NORWELD				
Certificated	160	312	299	327
w/Master's	70	85	97	92
OVAL				
Certificated	81	131	136	139
w/Master's	32	29	39	48
SOLO				
Certificated	70	134	129	147
w/Master's	23	34	28	36
SWORL/GCLC				
Certificated	247	449	414	402
w/Master's	124	151	147	154

Table 20, continued

WORLDS				
Certificated	98	169	170	167
w/Master's	33	54	53	59
STATE TOTAL				
Certificated	1,955	2,921	2,823	2,943
w/Masters	915	1,088	1,151	1,199

---

*These 1976-79 figures are population totals listed in the annual statistical directories compiled by The State Library of Ohio, Columbus, Ohio (e.g., 14).

The following sections contain sampled districts' predictions on the number of school librarians to be employed through 1990. Since district totals were requested, it is believed that the reporting problem discussed above would not occur. Nevertheless the sample was instructed to count each librarian only once. If the librarian's responsibility cut across grade levels, the FTE was to be distributed proportionately.

Anticipated Growth through 1990

Table 21 reports estimated totals through 1990. Table 22 presents a regional breakdown of these estimates. Respondents predicted a decline in the number of positions filled by certificated librarians from 1979 to 1982, with a reversing of this trend by 1983. The average number of positions to be filled each year during the 1986-90 period should not, however, exceed 1979 figures (1,206 vs 1,232). This declining trend is particularly evident at the elementary and junior high levels. The decrease in junior high positions should be due, in part, to the expanding middle school concept. The middle school building level indicated additional certificated positions while junior high buildings close or are converted to middle schools. Many respondents commented that declining enrollments and/or school closing would result in fewer certificated positions for the next five years.

Table 21 demonstrates that school districts anticipate an upgrading of job encumbents and job qualifications over the next ten years. The number of positions filled by certificated librarians may decrease but there will be a tendency to fill these remaining slots with individuals holding master degrees. In 1980, 637 MA/M.Ed degree holders were employed as school librarians. By 1986-90, an average 782 should be employed each year. This trend of upgrading library personnel holds for all building levels.

Percentages of certificated librarians holding master's degree were computed for each district. Regional and state averages were obtained. Figure 2 graphs the median percentages over time. Appendix H contains the median percentage data used in plotting these graphs. Of primary interest in Figure 2 is the last segment illustrating state trends. In 1979 the average responding district employed master degreed personnel in approximately 50% of the certificated librarian positions. Districts predicted this would increase to an average 75% by the period 1986-90.

The average school district predicted that all senior high certificated librarians would have the master's degree by 1981. By 1985, the average responding district indicated 100% of the certificated library personnel would hold the specified graduate degree. Even by the 1986-90 period, however, elementary school librarians still would not be 100% "master degreed", the median percentage being 88%.

Table 21

Number of Certificated Librarians and Certificated Librarians with Master's Degree at Each Grade Level: State Totals*

LEVEL	YEAR							Avg.
	1979	1980	1981	1982	1983	1984	1985	1986-90
Elementary								
Certificated	638	603	591	590	593	599	611	610
w/Master's	281	277	284	296	302	299	315	336
Middle School								
Certificated	55	58	61	63	73	74	75	77
w/Master's	23	29	30	33	42	42	46	50
Junior High								
Certificated	207	199	186	182	177	176	176	178
w/Master's	98	106	100	104	104	105	105	108
Senior High								
Certificated	332	331	328	330	333	333	333	341
w/Master's	206	225	225	230	235	239	245	288
TOTAL								
Certificated	1,232	1,191	1,166	1,165	1,176	1,182	1,195	1,206
w/Master's	608	637	639	663	683	685	711	782

*All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled in the larger districts which comprise 50% of total Ohio certificated librarians.

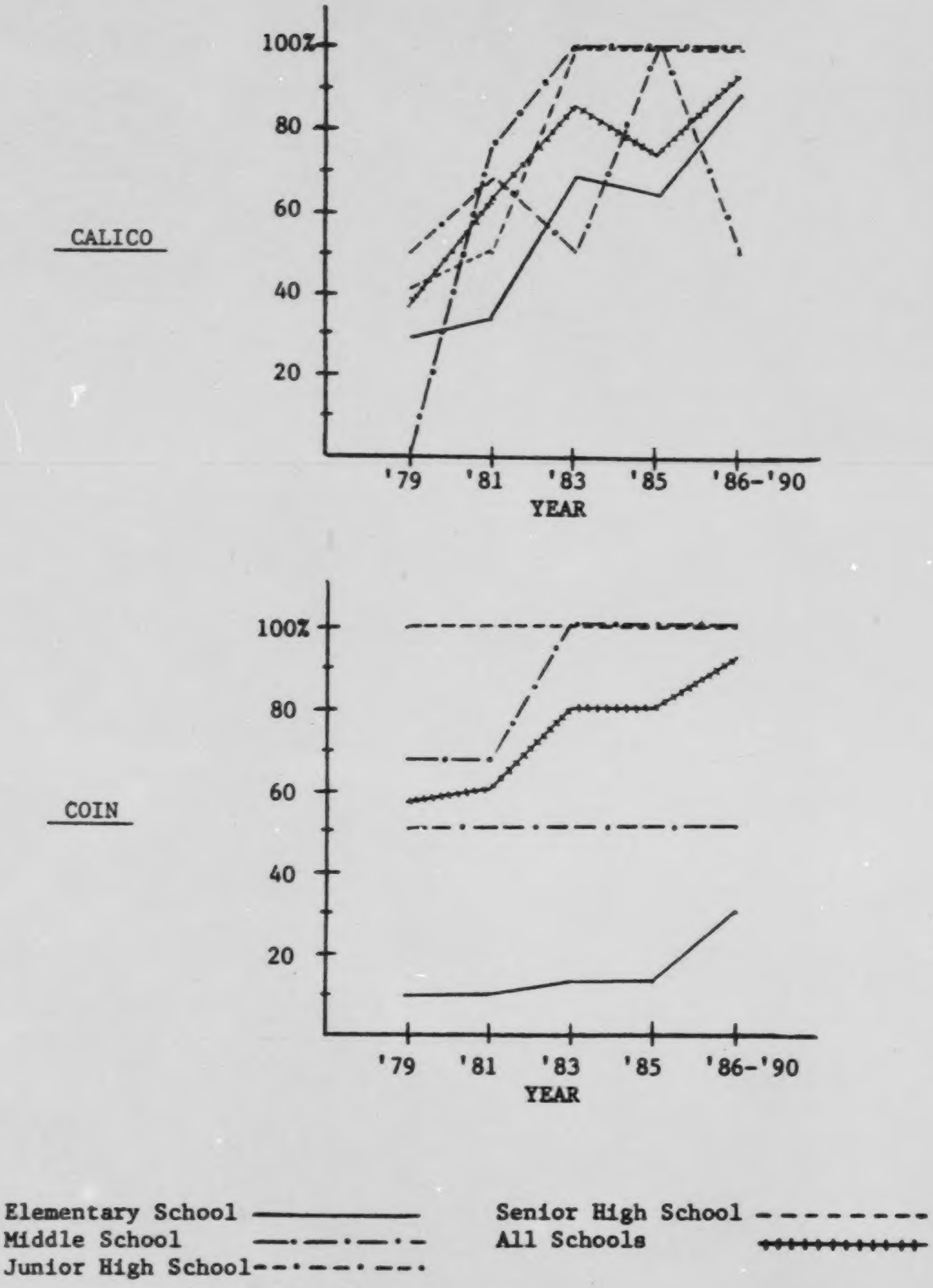

Figure 2
Percentage of Certified Librarians Holding
a Master's Degree in Library Science or
Educational Media

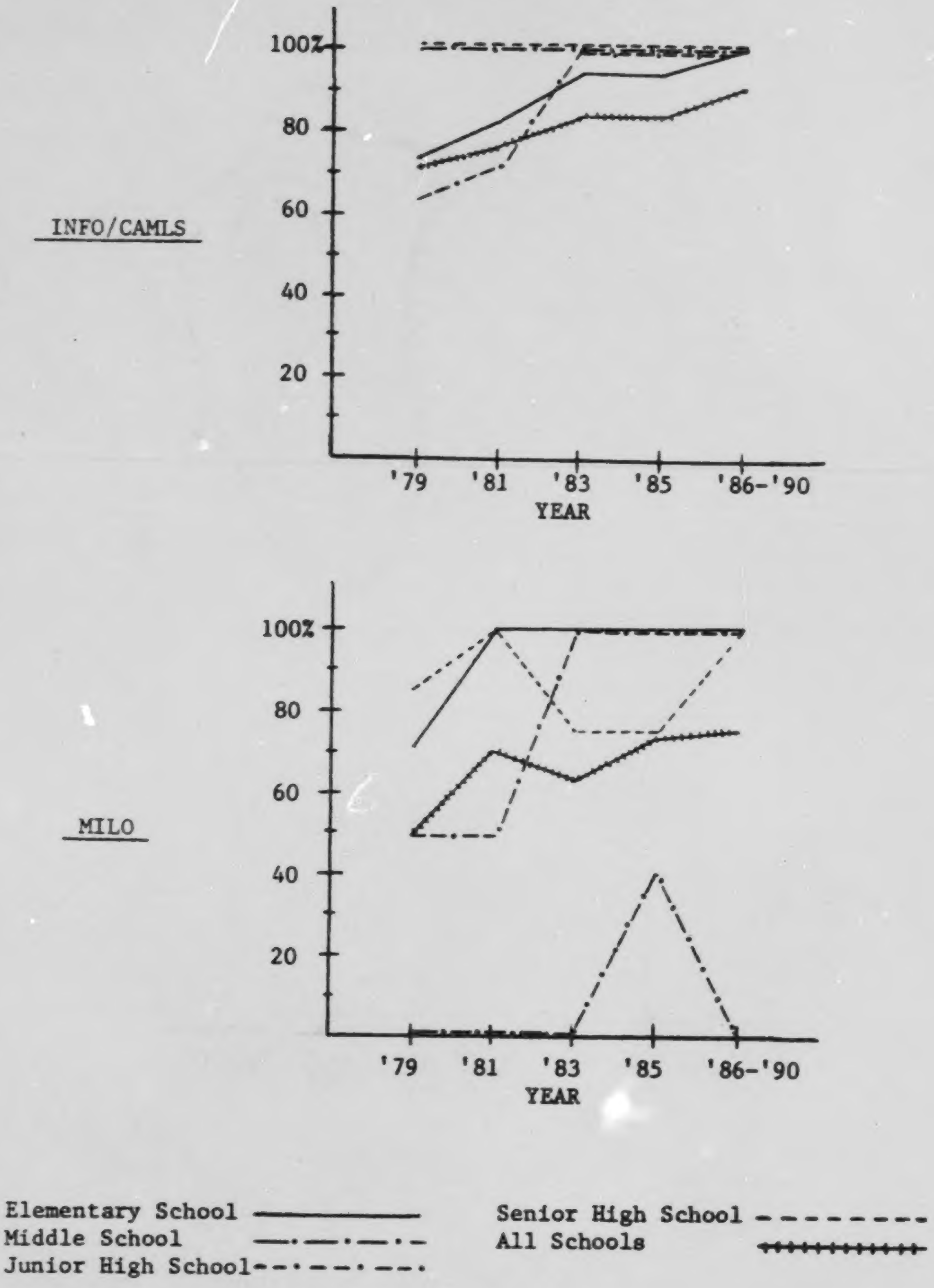

Figure 2
Percentage of Certified Librarians Holding
a Master's Degree in Library Science or
Educational Media
(continued)

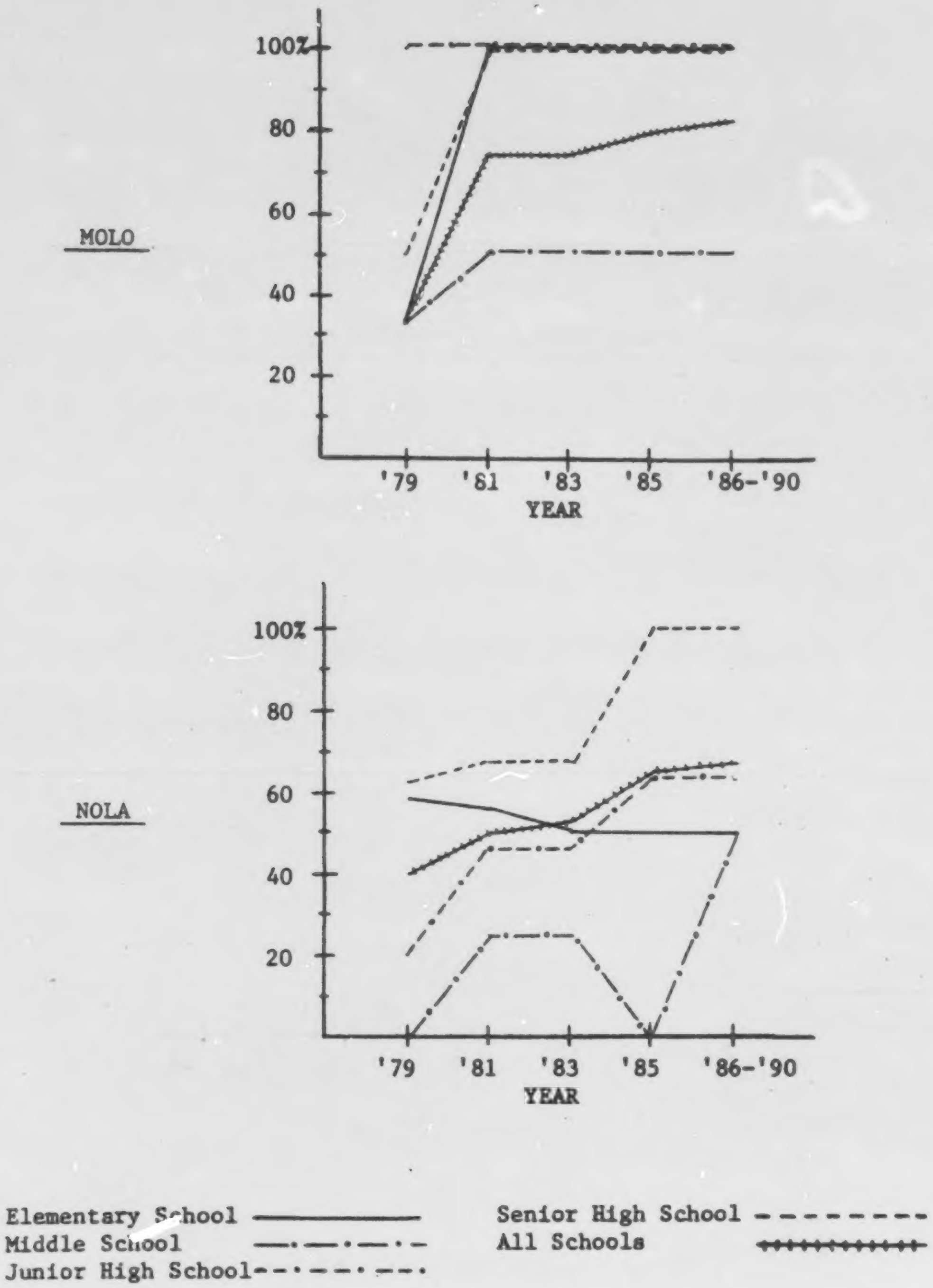

Figure 2
Percentage of Certified Librarians Holding
a Master's Degree in Library Science or
Educational Media
(continued)

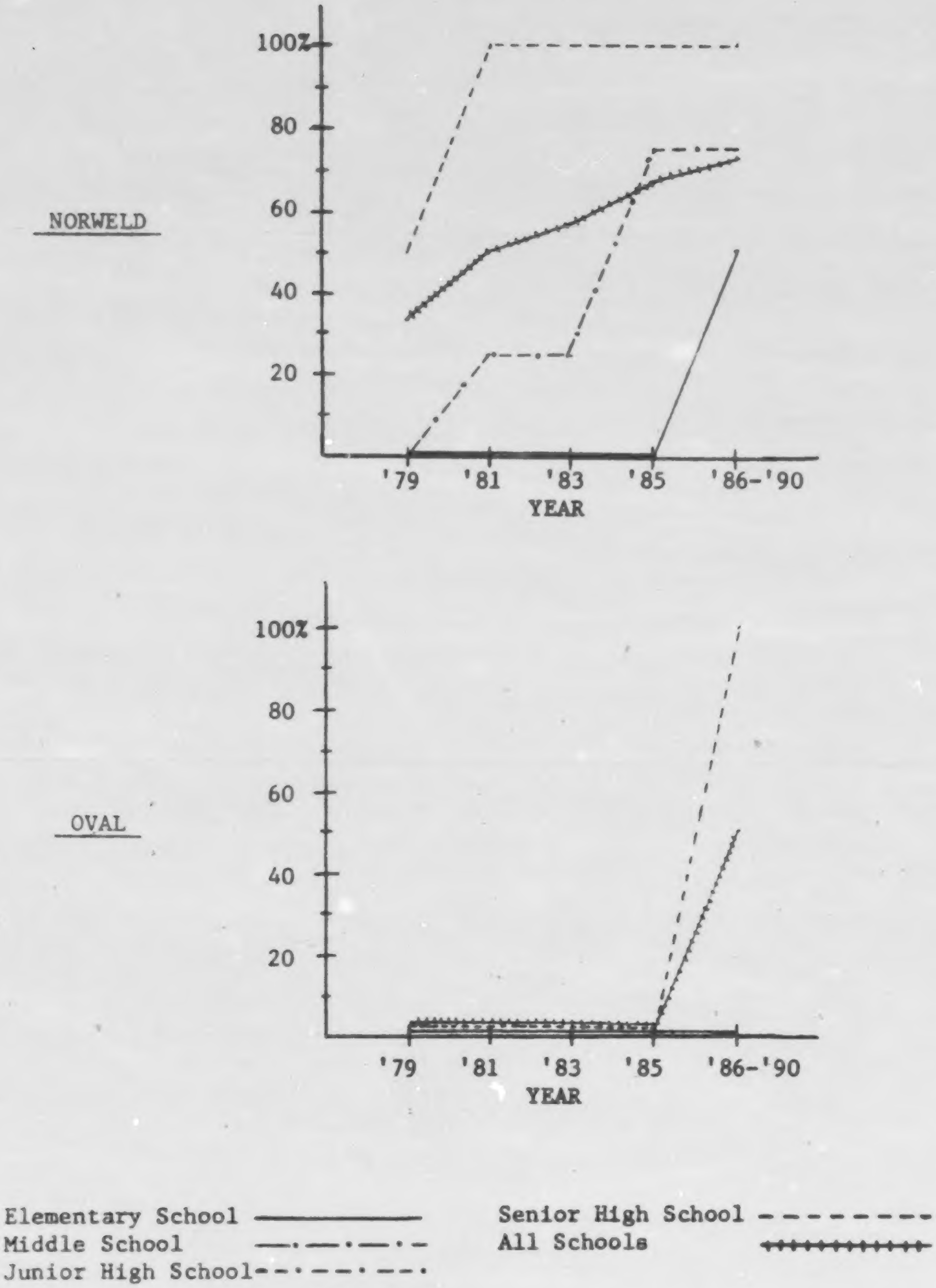

Figure 2
Percentage of Certified Librarians Holding
a Master's Degree in Library Science or
Educational Media
(continued)

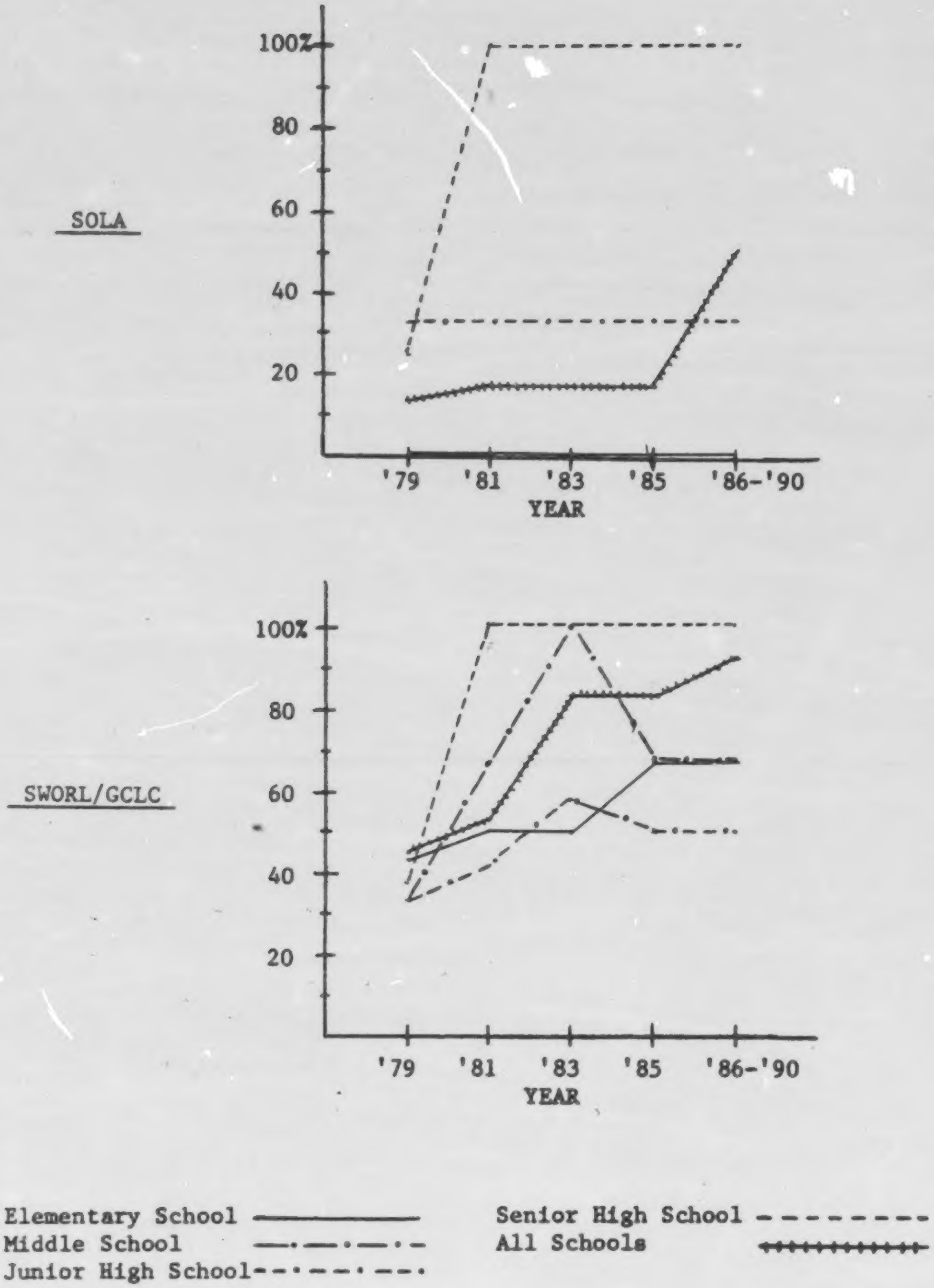

Figure 2
Percentage of Certified Librarians Holding
a Master's Degree in Library Science or
Educational Media
(continued)

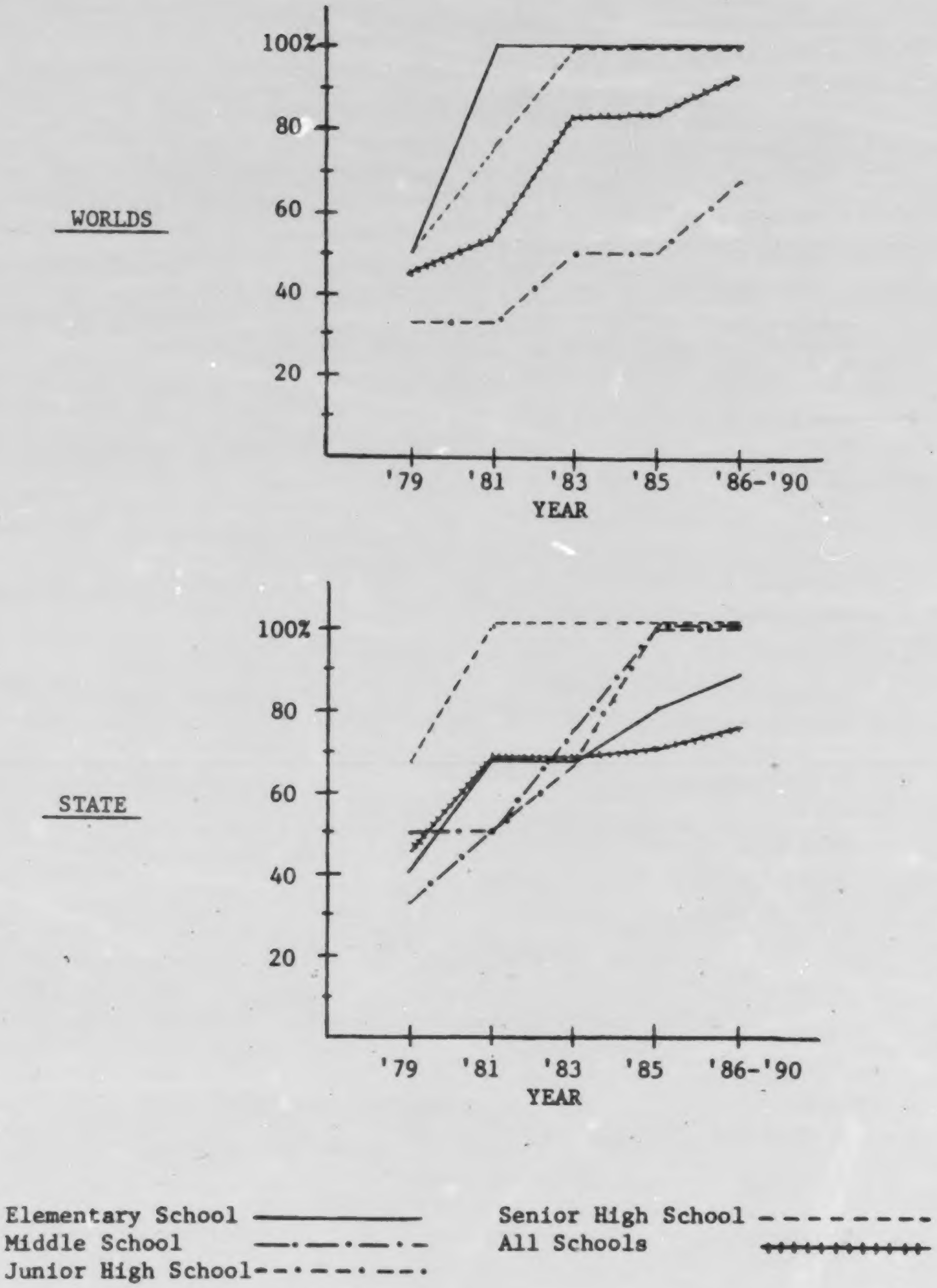

Figure 2
Percentage of Certified Librarians Holding
a Master's Degree in Library Science or
Educational Media
(continued)

The reader is reminded that these are median percentages. Obviously not all respondents predicted 100% employment of graduate degree holders by 1985. Those readers interested in arithmetic means are referred to data reported in Appendix H.

Table 22 breaks state totals of certificated librarians down by region. It is interesting to note that the optimism and pessimism conveyed respectively by CALICO and INFO/CAMLS PAS libraries characterize school responses as well. Although state totals for 1986-90 should not exceed 1979 figures for responding districts, CALICO districts expect to experience an increase over 1979 figures. This is also true for MILO, NOLA and WORLDS districts. In contract INFO/CAMLS districts see a continued decrease through 1986-90; with only 316 certificated positions compared to the 1979 total of 371. This trend is true to a lesser degree in SWORL/GCLC and NORWELD districts.

Table 22 confirms patterns evident in Figure 2. All regions anticipate an increase in number of MA/M.Ed certificated staff in public school libraries. For grade level data on each region, the reader is referred to Appendix I.

As with the PAS results, annual growth rates were computed and nonrespondent constants adjusted approximately. Table 23 presents the average annual growth rate at each level for each reporting period. These trends have already been discussed.

Table 24 repeats the unadjusted totals for certificated and certificated with master's degree librarians and adjusts these totals using growth rates in Table 23. Rounding to the closest ten, by 1985 there should be approximately 1,200 certificated librarians employed by sampled districts. Since the sample represents close to 50% of all Ohio schools, this figure may be doubled to 2,400. By 1990, 1,210 (sample) or 2,420 certificated librarians would be employed by Ohio schools. (Since school districts were asked to correct FTE errors reported in 1979, 1979 figures for the sample are less than 50% of the 1979 state figures).

Similarly by 1985, 1,460 of the 2,400 certificated librarians should hold the specified master's degree. By 1990 1,600 of the 2,420 librarians should have a master's degree in library science or educational median/technology.

Annual Professional Vacancies Anticipated in Ohio Public School Libraries

Table 25 reports regional breakdowns for predicted vacancies for two reporting periods, 1980-85 and 1986-90. These vacancies are analyzed only at the master degree level since the needs assessment was conducted to determine the need for additional graduate education in librarianship in Ohio.

Table 22

A Regional Breakdown of Certificated Librarians and Certificated Librarians with Master's Degree, 1979-1985*

REGION	YEAR							Avg.
	1979	1980	1981	1982	1983	1984	1985	1986-90
CALICO								
Certificated	225	227	226	226	277	233	235	240
w/Master	95	102	104	109	117	113	116	134
COIN								
Certificated	26	26	26	25	25	26	26	26
w/Master	14	14	16	16	17	18	18	21
INFO/CAMLS								
Certificated	371	347	338	333	330	330	332	316
w/Master	251	251	253	261	262	264	271	283
MILO								
Certificated	102	100	106	107	112	112	119	123
w/Master	56	55	59	62	62	63	70	77
MOLO								
Certificated	63	58	53	53	53	53	56	63
w/Master	28	31	26	27	28	28	32	36
NOLA								
Certificated	90	88	86	88	91	92	92	96
w/Master	41	45	46	47	51	53	55	65

Table 22, continued

REGION	YEAR							Avg.
	1979	1980	1981	1982	1983	1984	1985	1986-90
NORWELD								
Certificated	123	115	116	117	118	118	118	118
w/Master	46	49	50	51	52	52	53	55
OVAL								
Certificated	2	2	2	2	2	2	2	2
w/Master	0	0	0	0	0	0	0	1
SOLO								
Certificated	28	23	23	23	23	23	23	23
w/Master	3	5	5	5	5	5	5	7
SWORL/GCLC								
Certificated	181	184	168	168	171	169	169	173
w/Master	66	77	60	74	78	78	82	90
WORLDS								
Certificated	21	21	21	23	24	24	24	26
w/Master	7	7	9	10	11	11	11	13
STATE**								
Certificated	1,232	1,191	1,165	1,165	1,176	1,182	1,196	1,206
w/Master	607	636	628	662	683	685	713	782

*All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled by sampled districts. (50% of total certificated staff).

**State totals in Tables 21 and 22 may differ due to rounding error.

Table 23

Annual Growth Rates in School Library Staff at Each Grade Level

	GROWTH PERIODS		
LEVEL	1976-1979*	1980-85	1986-90
Elementary			
Certificated		0.3%	- 0.2%
w/Master's		2.6%	6.7%
Middle School			
Certificated		5.4%	- 1.3%
w/Master's		10.0%	8.7%
Junior High			
Certificated		- 2.4%	1.1%
w/Master's		- 0.2%	2.8%
Senior High			
Certificated		0.1%	2.4%
w/Master's		3.7%	17.6%
TOTAL			
Certificated	16.8%	0.1%	0.7%
w/Master's	9.6%	2.2%	10.0%

*Total growth rates for 1976-79 are based on data reported in Table 20. Grade level breakdowns were unavailable for the 1976-79 period.

Table 24

Grade Level Breakdown on Number of Certificated Librarians and Certificated Librarians with Master's Degree: Adjusted and Unadjusted Estimates for 1985 and 1990

		Unadjusted*		Adjusted+	
LEVEL	1979	1985	1990	1985	1990
Elementary					
Certificated	638	611	610	614	613
w/Master	281	315	336	325	351
Middle School					
Certificated	55	75	77	77	77
w/Master	23	46	50	47	51
Junior High					
Certificated	207	176	178	171	173
w/Master	98	105	108	105	108
Senior High					
Certificated	332	333	341	333	343
w/Master	206	245	288	254	306
Total					
Certificated	1,232	1,195	1,206	1,195	1,206
w/Master	608	711	782	731	816

*These totals include the 1979 data on non-responding districts plus the predicted staff sizes of responding districts. Totals are therefore conservative estimates for sampled districts (50%).

+These totals include the 1979 data for non-responding libraries, adjusted by growth rates for each period, plus the predicted staff sizes of responding libraries. Totals may therefore be more liberal estimates for sampled districts (50%).

Table 25

Regional Breakdown of Predicted
Master Level Hirings Due to Expansion, Replacements,
and Retirements, 1980-1990

REGION	Hiring Due to Expansion or Staff Upgrading		Total Hires Predicted	
	1980-85 (N=99)	1986-90 (N=69)	1980-85 (N=172)	1986-90 (N=278)
CALICO	14.2	26.3	21.5	13.5
COIN	4.0	3.7	1.2	0.0
INFO/CAMLS	20.2	17.5	38.4	30.2
MILO	15.2	9.9	9.9	6.3
MOLO	6.1	5.8	5.2	16.1
NOLA	10.1	14.9	9.3	9.7
NORWELD	4.0	2.9	1.7	2.3
OVAL	0.0	1.5	0.0	0.0
SOLO	0.0	2.9	0.6	0.0
SWORL/GCLC	22.2	11.7	9.3	11.1
WORLDS	4.0	2.9	2.9	10.8
	100.0%	100.0%	100.0%	100.0%

Responding districts indicated that 99 positions should open in the period 1980-85 due to expansion or staff upgrading. In the 1986-90 period 69 positions should open. These figures average out to 17 and 12 annual openings for the two reporting periods. Because corresponding numbers of certificated positions were not expected to open for these periods, it is believed this expansion is due primarily to upgrading of encumbents or replacement at a higher degree level. Turnover may be reflected therefore.

Expansion figures are calculated by adding all positive changes in staff size occurring during the reporting period. To identify total vacancies due to retirement, replacement and expansion, the survey form requested an annual estimate of total hires at the master level through 1990. One hundred seventy-two (172) hires were anticipated for 1980-85; 278 for 1986-90. These figures average out to 29 and 46 annual openings per reporting period.

As with the PAS data, average hiring rates were computed for each reporting period and applied to adjusted and unadjusted totals for total hire estimates. These hiring rates and resulting estimates indicate district and not grade level trends.

Table 26 again mirrors trends reported earlier. Employment prospects for graduate level certificated librarians are expected to brighten through 1990. Table 27 presents estimated vacancies for 1985 and 1990. Population figures have doubled sample estimates since sampled districts represented approximately 50% of Ohio public school districts.

By 1985 approximately 65 certificated librarians with appropriate graduate training should be hired annually; by 1990, approximately 140. Again these estimates result from rounding off the adjusted vacancy totals for each year.

Table 26

Average Percentage of Certificated Librarians with Master's Degree Hired Each Year in Ohio Public Schools*

1979	1980-85	1986-90
2.7%	4.4%	8.4%

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*These percentages are ratios of the number of Master level hires reported annually to the total number of certificated librarians with master's degrees. Ratios were computed using data of responding districts only.

Table 27

Estimated Total Annual Vacancies for Certificated School Librarians with Master's Degrees

---

		Unadjusted*		Adjusted+	
	1979	1985	1990	1985	1990
Sample	16	31	66	32	68
Population	32	62	132	64	136

---

*Estimated number of vacancies are calculated using respective percentages in Table 26 with unadjusted totals in Table 24.

+Estimated number of vacancies are calculated using respective percentages in Table 26 with adjusted totals in Table 24.

Conclusions and Implications

Summary of Predicted Demand

Predicted patterns and magnitude of demand in Ohio libraries through 1990 deviated little from similar predictions made by the Bureau of Labor Statistics (BLS) in the early seventies [10]. Although expansion will continue, it will occur at levels far below pre-1980 growth.

As BLS predicted, public libraries will experience slowing growth rates through the 1980's; academic libraries, virtually no expansion in professional staffs; and school libraries, modest growth in the last portion of this decade. Special libraries predict steady expansion rates for this decade; but far below pre-1980 levels.

Unlike BLS predictions, Ohio PAS libraries anticipate little change in the support/professional staff ratio. Professional expansion rates are expected to exceed support staff growth rates in public libraries, the largest employing library type. On the average, public and special libraries will meet the minimum support/professional ratio by the National Inventory of Library Needs (2:1), but academic libraries will fail to do so.

For professional librarians with graduate degrees in library science or educational media/technology, public libraries and school libraries will offer the most employment opportunities through 1990. Public schools predict a pattern of decline and then increase in certificated library openings; however a steady increase in need and positions for graduate trained personnel is predicted.

If trends observed in the past five years hold for the next five years, then librarians seeking PAS employment will face increasing competition for public library and special library openings. Academic library positions should continue to attract similar, or perhaps even fewer applicants. Applicants experienced with on-line data base searching, computer technology, and audio-visual technology will be in highest demand. Reference, administrative, and outreach personnel will continue to be needed. Professionals with specialty or scientific training will be needed, but at a much lower level. Less need is expected for cataloging and other technical service areas.

Although northeastern Ohio will remain the highest regional employer of librarians, there should be some slight shifting of employment opportunities. To summarize these shifts, regional totals for 1979 and 1990 were aggregated in broader geographic areas as follows: 1) Northeast (INFO/CAMLS, MOLO and NOLA), 2) Northwest (NORWELD and WORLDS) 3) Central (CALICO and COIN), 4) Southwest (MILO and SWORL/GCLC) and 5) Southeast (OVAL and SOLO).

Table 28 shows anticipated shifts in PAS professional librarians. Libraries located in northeastern Ohio should employ fewer of Ohio professional librarians in 1990 than they did in 1979. This is primarily due to the low growth rates predicted by INFO/CAMLS libraries. Central Ohio libraries should employ more of Ohio professionals by 1990, when compared to 1979. This results from anticipated expansion among CALICO libraries. Only academic shifts deviate from these patterns, perhaps due to the lower response rate for large academic institutions.

Similar distribution was noted for school libraries, as seen in Table 29. Northeastern Ohio should employ fewer certificated librarians with graduate degrees and CALICO, more.

As BLS predicted however, most job openings will stem from replacement needs, rather than expansion. The regional breakdowns in Table 28 and 29 accurately reflect the distribution of expected employment opportunities. Readers interested in projected distribution following the regional system used in this report are referred to Figures 3 and 4. The northeastern, central and southwestern regions of Ohio will continue to offer most employment opportunities.

Supply and Demand

The primary objective of this study was to determine if and where alternative/additional graduate education programs in library and information science should be developed in Ohio. To meet this objective, projected personnel demand must be compared to projected personnel supply. The graduate library science programs in Ohio which offer ALA-approved degrees (i.e., Kent State University and Case Western Reserve University) provided such projections through 1990.

Table 30 reports the number of librarians graduating annually from Ohio graduate library science programs between 1976 and 1980, and projections on degrees awarded through 1990. As mentioned earlier in this report, the average number of annual graduates from ALA accredited library programs dropped from 102 in 1976 to 88 in 1979 [8]. Ohio programs also produced fewer graduates in each year during the 1976-1980 period. In 1979 223 MLS degrees were awarded; in 1980, 195 MLS degrees. The upsurge in 1979 graduates was due to the first group of part time students graduating from the Kent State Columbus Extension Program.

Starting in 1982, Ohio programs expect the trend to be reversed. By 1982, it is anticipated that 205 MLS degrees will be awarded by Ohio programs. This should jump to 245 degrees by 1985. An annual average of 250 degrees is projected for the 1986-90 period. It should be noted that an increase is also projected in the annual number of specialist and doctoral degrees granted during the 1981-1990 period.

Table 28

Shifts in Geographical Location of Professional PAS Librarians, 1979-1990

OHIO AREA*	Overall 1979	Overall 1990	Public 1979	Public 1990	Academic 1979	Academic 1990	Special** 1979	Special** 1990
Northeast	48.2	45.3	55.1	49.9	34.5	35.5	61.1	54.4
Northwest	10.5	10.9	10.3	10.9	12.7	12.7	-	-
Central	17.9	19.9	14.6	18.6	21.1	19.9	32.7	36.0
Southwest	21.2	20.6	18.6	18.6	27.6	26.0	6.2	8.7
Southeast	2.2	3.3	1.4	2.0	4.1	5.9	0.0	0.9
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Areas are defined by aggregating the following regions: 1) Northeast (INFO/CAMLS, MOLO, NOLA), 2) Northwest (NORWELD, WORLDS), 3) Central (CALICO, COIN), 4) Southwest (MILO, SWORL/GCLC), and 5) Southeast (OVAL, SOLO).

**Dashes indicate no special libraries were sampled from the region.

Table 29
Shifts in Geographical Location of Certificated Librarians and Certificated Librarians with Master's Degree, 1979-1990

OHIO AREA*	Certificated		With Master's	
	1979	1990	1979	1990
Northeast	42.5	39.4	52.7	48.1
Northwest	11.6	12.0	8.8	9.4
Central	20.4	22.0	17.9	21.0
Southwest	23.0	24.5	20.1	20.5
Southeast	2.5	2.1	0.5	1.0
	100.0%	100.0%	100.0%	100.0%

---

*Areas are defined by aggregating the following regions: 1) Northeast (INFO/CAMLS, MOLO, NOLA), 2) Northwest (NORWELD, WORLDS), 3) Central (CALICO, COIN), 4) Southwest (MILO, SWORL/GCLC), and 5) Southeast (OVAL, SOLO).

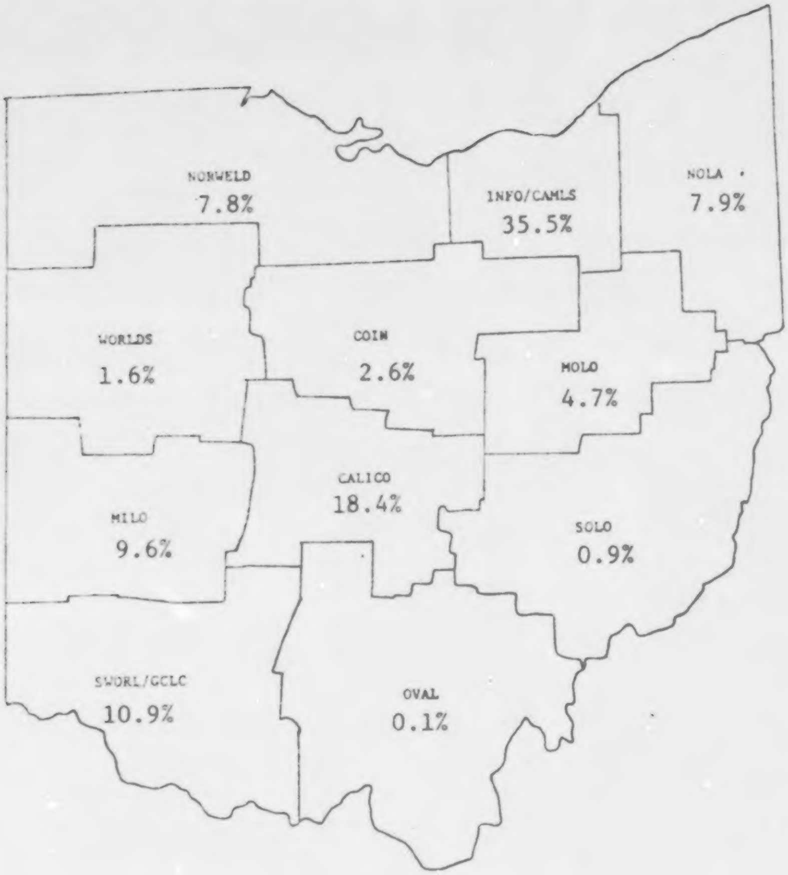
NORWELD
7.8%
INFO/CAMLS
35.5%
NOLA
7.9%
WORLDS
1.6%
COIN
2.6%
MOLO
4.7%
MILO
9.6%
CALICO
18.4%
SOLO
0.9%
SWORL/GCLC
10.9%
OVAL
0.1%

Figure 3

Projected Distribution of Professional
Employment Opportunities
in Public, Academic
and Special Libraries
1990

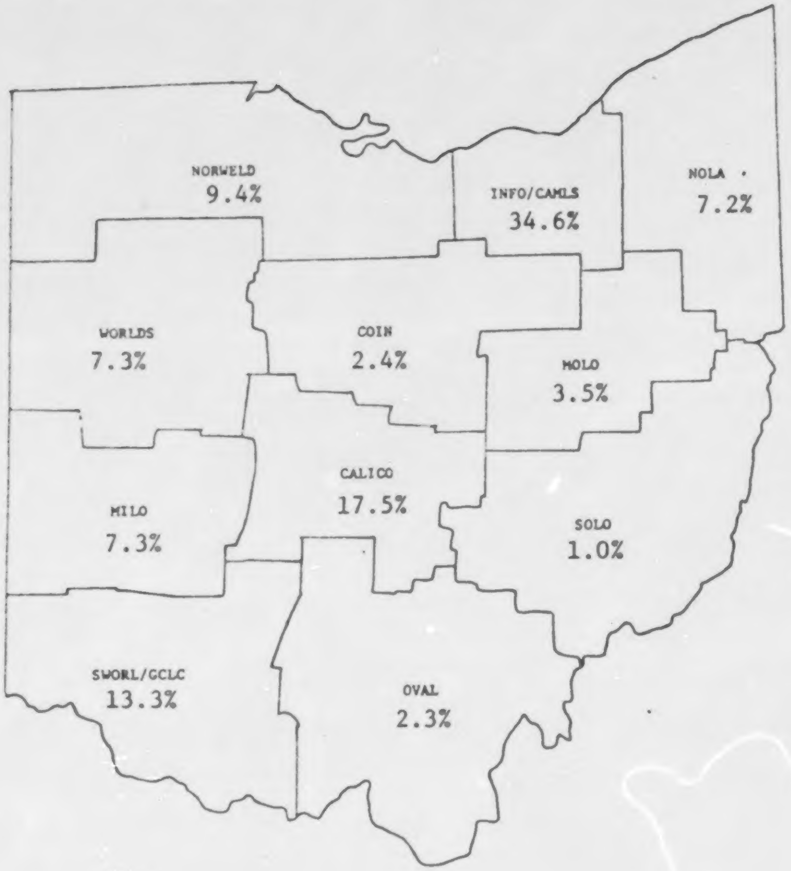
NORWELD
9.4%
INFO/CAMLS
34.6%
NOLA
7.2%
WORLDS
7.3%
COIN
2.4%
MOLO
3.5%
CALICO
17.5%
MILO
7.3%
SOLO
1.0%
SWORL/GCLC
13.3%
OVAL
2.3%

Figure 4

Projected Distribution of
Employment Opportunities
in Public School Libraries
for Librarians with Graduate
Education in Library Science or
Educational Media/Technology
1990

Table 30

Number of Graduates Anticipated from ALA-Accredited Library and Information Science Programs in Ohio, 1976-1990

	1976	1977	1978	1979	1980	
Master's	222	236	198	223	195	
Post Master's	9	9	10	4	10	
Total	231	245	208	227	205	
	1981	**1982**	**1983**	**1984**	**1985**	**Annual Average 1986-90**
Master's	195	205	215	230	245	250
Post Master's	9	10	11	12	14	14
Total	206	215	226	242	259	264

Before comparing these supply figures to projected demand, a closer look at 1976-1979 placement trends seems warranted. Data on Case Western Reserve and Kent Sate placements were derived from annual placement surveys published each year in Library Journal and The Bowker Annual [6, 7, 8, 16, 17]. Since these surveys report the number of first professional degree graduates that have found positions each year, it was possible to calculate a rough placement rate for Ohio graduates. Table 31 presents this information. During the 1976-1979 period, approximately 65% to 70% of the Ohio, MLS graduates were able to secure employment by the time of survey. If one adjusts the total number of graduates using the entry rate assumed by the BLS report [10], then rough 85% of the graduates desiring employment were placed by the time of survey.

Table 32 breaks down this placement by library type. Most of Ohio graduates found employment in public libraries. School libraries attracted the fewest number of graduates. The average percent distribution for the period 1976-1979 was public (34%), academic (22%), school (19%) and other library related agencies (25%). This distribution was utilized when analyzing supply and demand below.

Finally, geographical breakdowns were obtained on graduate placements. These data were supplied by Ohio ALA accredited programs. In 1979, 15% of placements were out-of-state. Twenty-one percent (21%) of the graduates were unemployed, suggesting the adjusted placement rates in Table 31 may be slightly inflated. Of those graduates obtaining placements in Ohio, 73% located in northeastern Ohio, 19% in central Ohio, and 5% in southwestern Ohio. The remaining placements were shared by the southeastern and northwestern regions. The central Ohio placement are probably due to the large number of students graduating from the KSU Columbus program that year.

Table 33 presents projected PAS supply and demand figures for 1985 and the period 1980-90. Demand has been given for the sampled libraries, approximately 80% of Ohio professionals employed in PAS libraries, and adjusted for the total population. In 1985, between 140 and 175 professional positions may be available. The range of openings for the 1980-90 period is 100 to 200, back to 1979 levels. Supply data have been provided for the same years. Absolute supply represents the total number of MLS degrees awarded. The PAS figures adjust the absolute total, using average placement to library rates given in Table 32. Accordingly PAS proportion are 81% of the absolute yearly totals. Finally actual entry figures have further adjusted PAS data, assuming an 80% entry rate suggested by the Bureau of Labor Statistics. No adjustments were made for out-of-state placement since it may be assumed that graduates of other programs may correspondingly seek Ohio placements, e.g., Michigan and Kentucky.

When absolute supply data are compared to predicted demand, a situation of oversupply exists for both 1985 and 1990. In 1985, 70 graduates may be unable to secure employment in Ohio; in 1990, 50.

Table 31

Placement Rates for MLS Graduates of Ohio Programs*

Year	Percentage of Graduates Placed	
	Total	Adjusted**
1976	64%	79%
1977	70%	88%
1978	70%	87%
1979	67%	84%

*Placement rates are based on number of annual graduates securing employment by April or May of the following year (i.e. at the time of Learmont's survey [6]).

**Adjusted percentages are ratios of total Ohio graduate placement to 80% of year's graduates. BLS [10] assumed 80% of new graduates would enter the field.

Table 32

Breakdown of Placements
by Library Type, 1976-1979

	1976	1977	1978	1979	Annual Average
Public	35	35	26	40	34
Academic	23	26	23	16	22
School	18	16	24	20	19
Other	24	25	27	24	25
	100%	100%	100%	100%	100%

Table 33

Supply and Demand for PAS Positions

YEAR	DEMAND		SUPPLY		
	Sample	Population	Absolute	PAS	Actual Entry
1979	160	200	225	183	146
1985	140	175	245	198	158
1990	160	200	250	203	162

Definitions

Sample: Number of positions predicted by sampled libraries.

Population: Sample predictions adjusted to reflect .8:1 sample/population ratio.

Absolute: Total number of MLS degrees granted.

PAS: Total number of MLS graduates available for PAS libraries.

Actual Entry: PAS figures adjusted by the BLS entry rate of 80%.

The PAS supply data suggests a less dismal employment situation. By 1985, roughly 20 MLS graduates may have problems, while only 3 graduates in the 1986-90 may be unable to find employment in Ohio. Finally when PAS supply is adjusted for entry rate, actual entry figures suggest that a surplus of professional jobs might exist; 17 in 1985, and 38 annually in the 1980-90 period.

When considering these data, the reader should recall that sampled libraries were the primary employers of MLS professionals. The remaining libraries in the state have fewer professionals on staff and/or offer less competitive salaries. Placement patterns of the past indicated that graduates gravitated towards large metropolitan areas - i.e., Cleveland, Columbus and Cincinnati. It is likely therefore that the additional openings offered by population demand figures may not attract new graduates, especially those with pre-professional library experience. In addition, it should be remembered that transfers and re-entrants have not been included in the supply figures. Also if 80% is the entry rate, then every year 20% of the graduates are added to a pool of potential supply. Translated into actual numbers, this means that between 1981 and 1985, a pool of roughly 175 delayed entrants would be created to compete with new degrees, re-entrants, and transfers during the 1986-90 period.

Consequently it appears that the job market for Ohio MLS graduates will continue to be extremely competitive, especially in metropolitan areas. If the qualifications advertised for professional openings continue to be similar to those advertised in the past five years, then experienced MLS degree holders and re-entrants will have an advantage in securing employment [18]. Rural libraries, particularly those in southeastern and northwestern Ohio, have to draw professional staff from inexperienced personnel and others unable to locate in metropolitan regions. The 85% placement rate reported earlier may indicate that some new graduates have difficulty finding positions and postpone employment rather than accepting non-professional or less desirable professional positions.

Although predicted demand for school library personnel suggests an opening market for graduates from library science and educational media master degree programs, the projected supply and demand cannot be discussed at this time due to lack of information on graduation projections from College of Education programs. When this information is obtained, a final appendix will discuss the school library job market for the 1980's.

Implications

The full implications of this study will be discussed in the needs assessment segment of the final project report. Some brief remarks are offered below.

The existing library science programs in Ohio should be able to meet the personnel needs of Ohio public, academic and special libraries for the next ten years. The most liberal assessment suggests that between 20 and 35 positions may be available for re-entrants, delayed entrants or transfers between 1985 and 1990. Even if these positions remained unfilled, this does not appear to represent sufficient need for establishment of a new library science program in the state. As the Board of Regents' report indicated [12], the capability of existing programs to meet this need should be explored first prior to establishing new programs. Advantages and disadvantages of a new program model will be analyzed in the final project report.

Four alternatives remain, an obvious one being to maintain the status quo. The Foreward enumerated three additional options: 1) to move the Kent State program to an area of greater need, 2) to expand the extension approach and 3) to develop a consortium approach, replacing and expanding on the extension program.

The program transfer model may not greatly reduce the current maldistribution of graduate library science training in Ohio. Both ALA programs are located in the northeastern section and both programs place the highest percentage of their graduates in this region. Kent State produces more Ohio placements, with 72% of these locating in northeastern Ohio. Northeastern Ohio should continue to offer the most employment opportunities. According to the Fall, 1980 enrollment figures for the KSU program, approximately two-thirds of the MLS enrollment consists of part-time students, the majority of these probably being employed in northeastern Ohio. The Kent program therefore is meeting the employment needs of northeastern PAS libraries as well as satisfying the educational demands of operating librarians and support staff in northeastern PAS libraries. Moving the state supported library science program from this area may create another pocket of unserved Ohio residents, residents perhaps unable to afford the higher tuition costs of the Case Western Reserve program. This option needs to be explored carefully.

The third and fourth options appear to be more viable alternatives. Although the northeastern segment will continue to offer most employment due to replacement needs, most expansion will occur in central and southwestern Ohio. The projected supply figures include future graduates of the Columbus extension program as well as main-campus and Cleveland branch programs. Continuance of the current level of Kent State involvement in the Columbus area could therefore be justified by supply/demand predictions. In addition, approximately one-third of the Kent State library science program's FTE is located in off-campus programs. Seventy-five percent (75%) of this off-campus FTE is from the Columbus extension program [19]. If the consortium approach were to expand the current extension effort, this report's findings suggest southwestern Ohio could be an additional area. These options will also be explored in more detail in the second phase of the Graduate Education for Librarianship in Ohio Project.

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Appendix A

Survey Materials for
Public, Academic and Special
Libraries

KENT STATE
UNIVERSITY
KENT, OHIO 44242

SCHOOL OF
LIBRARY SCIENCE
(216) 672-2782

October 15, 1980

Dear Librarian:

The School of Library Science at Kent State University has received a grant from The State Library of Ohio to study anticipated personnel needs in Ohio libraries during the next fifteen years. Results of this study, supplemented by a concurrent investigation of projected enrollments in Ohio schools of library science, will determine the need for new or modified library science programs in the state. In addition the data will enable library education programs to provide appropriate career counseling to future applicants.

Please help us in this effort by completing the enclosed questionnaire and returning it to the address below no later than Friday, October 31, 1980. A stamped self-addressed envelope has been provided.

In providing these estimates please consider the following factors: 1) the number of personnel who will be nearing retirement age, 2) institutional plans for expansion, 3) changes in enrollment or community growth rate, whichever is appropriate, 4) technological impact on personnel needs, and 5) anticipated changes in library funding.

We recognize the questionnaire requires some guesswork, particularly for projections after 1985. We also realize that the questionnaire may require a substantial time investment, especially by larger institutions. Without your assistance however, we will be unable to evaluate the need for future expansion, curtailment, or reorientation by graduate library education programs in Ohio.

Thank you for your cooperation. If there is any way we can be of assistance, please call (614) 466-5264.

Sincerely,

Mary T. Kim

Mary T. Kim, Ph.D.
Research Associate
Graduate Education for
Librarianship in Ohio Project

MTK/BAD
Enclosure

INSTRUCTION SHEET

A. General instructions and remarks.

1. Please complete both sides of the survey form.
2. All numbers in parentheses and brackets are keypunch instructions.
3. All staff figures represent total full-time equivalents (i.e., total FTE = full-time (FTE) + part-time (FTE))

B. Staff definitions.

1. Professional library positions have been defined for each library type as follows:

academic: The number of professional staff corresponds to the sum of three professional categories reported annually to the State Library of Ohio, namely a) number of chief, deputy, associate, and assistant chief librarians, b) number of all other librarians, and c) number of other professional staff on library budget.

public and special: The number of professional staff corresponds to the total number (FTE) of librarians, media and audiovisual specialists, etc. holding a graduate degree in any field. Staff with bachelor's degrees or less are not included in this total.

2. Support staff positions have been defined for each library type as follows:

academic: The number of support staff (FTE) equals the total number of technical, clerical and other supporting staff on library budget, as reported annually to the State Library of Ohio. Maintenance, custodial, and student personnel are not included in the support staff total.

public and special: The number of support staff (FTE) equals the number of technical, clerical and other staff PLUS THE NUMBER OF LIBRARIANS, MEDIA, AND AUDIOVISUAL SPECIALISTS WITH A BACHELOR'S DEGREE OR LESS. Maintenance and plant operation are not included in this figure.

C. Directions by section.

Section 2: Previous and present personnel needs

2a. Number of professional library positions filled (FTE)

Statistics reported by your library in 1976, 1977, 1978, and 1979 have been recorded on the form. An NA in this section indicates data was not available for that year. Please provide this missing data if possible. For the 1980 figure, please fill in the total number (FTE) of professional positions currently filled. Use the definition of professional circled above.

2b. Number of support positions filled (FTE)

Statistics reported by your library in 1976 through 1979 have been recorded on the form. An NA in this section indicates data was not available for that year. Please provide this missing data if possible. For the 1980 figure, please fill in the total number (FTE) of support positions currently filled. Use the definition of support staff circled above.

2c. Number of professionals retiring that year (FTE)

Please record the number of professionals retiring from the library in 1976, 1977, etc. Use the anticipated figure for 1980. Use the professional definition circled above.

OVER

2d. Number of professionals hired that year (FTE)

Please record the number of professionals hired for new positions and/or for positions vacated through retirements and resignations in 1976, 1977, etc. Use anticipated hirings for 1980. Use the professional definition circled above.

Section 3: Projected needs through 1985.

3a. Number of professional library positions anticipated (FTE)

Please estimate the number of professionals you expect to be employing in 1981, 1982, etc. This estimate should reflect any anticipated expansion, reassignment of clerical tasks to support staff, salary constraints, funding outlook, etc.

3b. Number of support positions anticipated (FTE)

Please estimate the number of support staff you expect to be employing in 1981, 1982, etc. This estimate should reflect any anticipated expansion, reassignment of clerical tasks to support staff, etc.

3c. Number of anticipated professional retirements that year (FTE)

Please estimate the number of professional staff that will retire from your library in 1981, 1982, etc. Again use the professional definition circled above.

3d. Number of anticipated professional hirings that year (FTE)

Please estimate the number of professionals you anticipate hiring in 1981, 1982, etc., to fill new positions and/or positions vacated by retirements and resignations. Use the professional definition circled above.

Section 4: Projected personnel needs, 1986-1990.

4a.
4b.
4c. This section repeats the estimating procedure of 3a-3d, with one
4d. exception. Please do not give a total estimate for the five year period but rather an estimate of annual average need per year.

Section 5: General questions.

Self-explanatory.

LIBRARY PERSONNEL NEEDS IN OHIO, 1980-1990

****
* Please read instruction sheet *
****

1. Institution/Library ______________________________
(1-3) [ ] (4-5) [ ] (6-7) [ ]

			YEAR		
2. Previous and present personnel needs	1976	1977	1978	1979	1980
a. Number of professional library positions filled (FTE)	(8-10)	(20-22)	(33-35)	(45-47)	(57-59)
b. Number of support positions filled (FTE)	(11-13)	(23-25)	(36-38)	(48-50)	(60-62)
c. Number of professionals retiring that year (FTE)	(14-16)	(76-28)	(39-41)	(51-53)	(63-65)
d. Number of professionals hired that year (FTE)	(17-19)	(29-31)	(42-44)	(54-56)	(66-68)

			YEAR		
3. Projected personnel needs through 1985	1981	1982	1983	1984	1985
a. Number of professional library positions anticipated (FTE)	(69-71)	(10-13)	(23-25)	(35-37)	(47-49)
b. Number of support positions anticipated (FTE)	(72-74)	(14-16)	(76-78)	(38-40)	(50-52)
c. Number of anticipated professional retirements that year (FTE)	(75-77)	(17-19)	(29-31)	(41-43)	(53-55)
d. Number of anticipated professional hirings that year (FTE)	2(1-4)[ ] (7-9)	(20-22)	(32-34)	(44-46)	(56-58)

	1986-1990
4. Projected personnel needs, 1986-1990	
a. Number of professional library positions anticipated per year (FTE)	____ (59-61)
b. Number of support library positions anticipated per year (FTE)	____ (62-65)
c. Number of anticipated professional retirements per year (FTE)	____ (67-69)
d. Number of anticipated professional hirings per year (FTE)	____ (70-72)

5. General questions.

a. Compared to five years ago, would you say the number of qualified applicants for a professional vacancy in your library has:

____ increased ____ decreased ____ remained the same

b. Which type of professional specialization, if any, do you think will be most needed by your library in the next decade? Please specify.

c. Which type of professional specialization, if any, do you think may be least needed by your library in the next decade? Please specify.

(73) | |

KENT STATE
UNIVERSITY
KENT, OHIO 44242

SCHOOL OF
LIBRARY SCIENCE
(216) 672-2782

November 5, 1980

Dear Librarian:

We have not as yet received your response to our personnel survey, perhaps due to one of the following reasons: 1) the previous questionnaire never reached you, 2) it arrived at your desk two days after the response deadline, 3) it was misplaced, 4) it lacked return postage, or 5) it simply could not be squeezed into your already crowded schedule. Whatever the reason, we regret any inconvenience that might have occurred and ask that you give us a second chance.

The original survey form, cover letter and instruction sheet are enclosed. Please note that unlike the National Inventory of Library Needs, we are not asking you to project the staff ideally required for quality service but rather the number of professional and support positions your library will actually be able to fill. Remember the form requires estimates of the total number of professional positions filled (i.e., 3a, 4a), the total number of support positions filled (i.e., 3b, 4b), the number of professional retirements (i.e., 3c, 4c), and the number of professional vacancies posted and filled (i.e., 3d, 4d) annually over the next decade. The instruction sheet provides further details.

Please complete the enclosed survey form and return it by Wednesday, November 19. If you have a problem with this return date or have questions regarding the form, please call (614) 466-5264.

Thank you for your prompt response. If your survey is already in the mail, we thank you for your cooperation and ask you to discard the enclosed.

Sincerely,

Mary T. Kim

Mary T. Kim, Ph.D.
Research Associate

MTK/vlg

Enclosure

Appendix B

Survey Materials for Public School Districts

KENT STATE
UNIVERSITY
KENT, OHIO 44242

SCHOOL OF
LIBRARY SCIENCE
(216) 672-2782

October 15, 1980

Dear School Library Coordinator:

The School of Library Science at Kent State University has received a grant from The State Library of Ohio to study anticipated personnel needs in Ohio libraries during the next fifteen years. Results of this study, supplemented by a concurrent investigation of projected enrollments in Ohio schools of library science, will determine the need for new or modified library science programs in the state. In addition the data will enable library education programs to provide appropriate career counseling to future applicants.

Please help us in this effort by completing the enclosed questionnaire and returning it to the address below no later than Friday, October 31, 1980. A stamped self-addressed envelope has been provided.

In providing these estimates please consider the following factors: 1) the number of personnel who will be nearing retirement age, 2) institutional plans for expansion, 3) changes in enrollment or community growth rate, whichever is appropriate, 4) technological impact on personnel needs, and 5) anticipated changes in library funding.

We recognize the questionnaire requires some guesswork, particularly for projections after 1985. We also realize that the questionnaire may require a substantial time investment, especially by larger institutions. Without your assistance however, we will be unable to evaluate the need for future expansion, curtailment, or reorientation by graduate library education programs in Ohio.

Thank you for your cooperation. If there is any way we can be of assistance, please call (614) 466-5264.

Sincerely,

Mary T. Kim

Mary T. Kim, Ph.D.
Research Associate
Graduate Education for
Librarianship in Ohio Project

MTK/BAD
Enclosure

SCHOOL LIBRARY PERSONNEL NEEDS, 1980-1990

* Please read instruction sheet before completing this form *

1. Name of School District ______________________
(1-3) [ ] (4-5) [ ] (6-7) [ ]

	YEAR							Average Number Per Year
2. Previous, present, and projected needs	1979	1980	1981	1982	1983	1984	1985	1986-1990
ELEMENTARY SCHOOL LIBRARIANS								
Certificated	(8-10)	(11-13)	(14-16)	(17-19)	(20-22)	(23-25)	(26-28)	(29-31)
With Master's Degree	(32-34)	(35-37)	(38-40)	(41-43)	(44-46)	(47-49)	(50-52)	(53-55)
MIDDLE SCHOOL LIBRARIANS								
Certificated	(57-59)	(60-62)	(63-65)	66-68)	(70-72)	(74-76)	(77-79)	2(6-8)
With Master's Degree	(9-11)	(12-14)	(15-17)	(18-20)	(21-23)	(24-26)	(27-29)	(30-32)
JUNIOR HIGH LIBRARIANS								
Certificated	(33-35)	(36-38)	(39-41)	(42-44)	(45-47)	(48-50)	(51-53)	(54-56)
With Master's Degree	(57-59)	(60-62)	(63-65)	(66-68)	(69-71)	(72-74)	(75-77)	(78-80)
SENIOR HIGH LIBRARIANS								
Certificated	3(6-8)	(9-11)	(12-14)	(15-17)	(18-20)	(21-23)	(24-26)	(27-29)
With Master's Degree	(30-32)	(33-35)	(36-38)	(39-41)	(42-44)	(45-47)	(48-50)	(51-53)
ANNUAL NEW HIRINGS OF CERTIFICATED LIBRARIANS WITH MASTER'S DEGREES (SYSTEM-WIDE)	(57-59)	(60-62)	(63-65)	(66-68)	(69-71)	(72-74)	(75-77)	(78-80)

INSTRUCTION SHEET

A. General instructions

1. Please complete all portions of the survey form.
2. Please ignore the numbers in brackets and parentheses. These are keypunch instructions.
3. Abbreviations:

"NR"	Data were not available from the Ohio Department of Education survey, 1979-80.
"NA"	Category is not applicable for your school district, e.g. not all school districts have middle schools.

4. Building levels:
   a. Vocational school librarians have been and should be included in high school librarian estimates.
   b. Special needs school librarians have been and should be included in elementary school librarian estimates.
   c. All other building levels follow the classification scheme of the Ohio Educational Directory, 1979-80.
5. Full-time equivalents: All figures reported and estimated are expressed in full-time equivalents. A librarian shared by three building libraries is still only one FTE, not three.
6. Corrections: If data reported for 1979 are inaccurate or incomplete, please make corrections. The following corrections may be appropriate:
   a. Conversion of 1979 data to full-time equivalents (FTE)
   b. Correction of building level data
   c. Provision of 1979-80 school year data where "NR" appears .

B. Definitions

1. Certificated: The number of librarians (FTE) who hold a valid Ohio certificate for library science or educational media. These figures are broken down by building level.
2. With master's degree: The number of certificated librarians (FTE) who hold a master's degree in libarary science or educational media. These figures are broken down by building level.
3. NOTE: The category "with master's degree" should not include anyone not also reported in the "certificated" total.

C. 1979-80 data.

1. Please verify statistics reported on your form for the 1979-80 school year.
2. Please record the total number of new certificated school librarians with master's degrees in library science or educational media who were hired in the 1979-80 school year. This is a system-wide total. Zero (0) is a possible response.

D. 1980-1985 data

1. Please complete the 1980 column by a) reporting the number (FTE) of certificated librarians, and certificated with master's degree librarians currently working at each building level and by b) reporting the total number (FTE) of new librarians hired for the district in 1980-81 with the master's degree in library science or educational media .
2. 1981-85 estimates: a) Please estimate the number of certificated librarians and the number of certificated librarians with master's degrees you expect to employ at each building level. Estimates should reflect plans for new media centers, upgrading of professional staff qualifications, salary constraints, continuing education activities of current librarians, etc. b) Please estimate the number of new master level librarians you may be hiring 1981, 1982, etc. This should reflect anticipated retirement, resignation, and expansion patterns.

E. 1986-1990: Average need per year. Please repeat the estimating procedure used for 1981-85, with one exception. Please provide an annual average for the 5 year period (1986-90), not a total 5 year estimate.

KENT STATE
UNIVERSITY
KENT, OHIO 44242

SCHOOL OF
LIBRARY SCIENCE
(216) 672-2782

November 5, 1980

Dear School Library Coordinator:

We have not as yet received your response to our personnel survey, perhaps due to one of the following reasons: 1) the previous questionnaire never reached you, 2) it arrived at your desk two days after the response deadline, 3) it was misplaced, 4) it lacked return postage, or 5) it simply could not be squeezed into your already crowded schedule. Whatever the reason, we regret any inconvenience that might have occurred and ask that you give us a second chance.

The original survey form, cover letter, and instruction sheet are enclosed. A few comments seem warranted. Remember the form requires estimates of the total number of certificated librarians your system will actually be able to employ at each building level. In addition the form requires an estimate of the number of those certificated positions at each level that will be filled by librarians with a master degree in library science or educational media. There may therefore be an overlap between the "certificated" category and the "with master's degree" category at each building level. Finally the form asks for an estimate of the number of librarian vacancies posted each year for which a certificated librarian with the specified master's degree would be hired. Further details are provided on the instruction sheet.

Please complete the enclosed form and return it by Wednesday, November 19. If you have a problem with this return date or have questions regarding the form, please call (614) 466-5264.

Thank you for your prompt response. If your survey is already in the mail, we thank you for your cooperation and ask that you discard the enclosed.

Sincerely,

Mary T. Kim

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Research Associate

MTK/vlg

Enclosure

GRADUATE EDUCATION FOR LIBRARIANSHIP IN OHIO:
AN LSCA TITLE III PROJECT
Room 1206, 65 S. Front Street, Columbus, Ohio 43215

Appendix C

Regional Breakdown of Professional and Support Staff Size for Sampled PAS Libraries: 1976-1979

TABLE 34

Total Professional and Support Staff by Year and Region

Public Libraries 1976-1979*

REGION		YEAR			
		1976	1977	1978	1979
CALICO (N=10)	Prof.	91.6	103.2	115.6	130.1
	Supt.	346.0	[illegible]	301.0	347.0
COIN (N=6)	Prof.	25.6	26.8	26.5	27.8
	Supt.	108.0	125.0	104.0	117.0
INFO/CAMLS (N=16)	Prof.	495.1	493.0	464.8	472.9
	Supt.	1233.0	1167.0	1032.0	1122.0
MILO (N=7)	Prof.	57.7	61.0	65.0	65.0
	Supt.	277.0	267.4	280.0	281.0
MOLO (N=7)	Prof.	25.9	27.6	27.6	28.6
	Supt.	232.0	229.0	231.0	194.0
NOLA (N-11)	Prof.	77.0	83.3	87.2	95.2
	Supt.	235.0	253.0	247.0	258.0
NORWELD (N=9)	Prof.	83.7	88.2	94.4	95.2
	Supt.	302.0	299.0	322.0	323.0
OVAL (N=5)	Prof.	6.0	7.0	7.0	5.0
	Supt.	74.0	71.0	72.0	63.0
SOLO (N=4)	Prof.	8.0	9.0	9.0	9.5
	Supt.	76.0	71.0	83.0	78.0
SWORL/GCLC (N=5)	Prof.	138.0	128.0	127.6	136.6
	Supt.	420.0	426.0	422.0	401.0

TABLE 34 continued

Total Professional and Support Staff by Year and Region

Public Libraries 1976-1979*

REGION		1976	1977	1978	1979
WORLDS (N=4)	Prof.	12.6	12.6	16.6	16.6
	Supt.	89.0	88.0	84.0	84.0
STATE	Prof.	1021.2	1039.7	1041.3	1082.5
	Supt.	3392.0	3364.4	3178.0	3268.0

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* The number of libraries represented in each region has been given under each region name, i.e. (N= n).

TABLE 35

Total Professional and Support Staff by Year and Region

Academic Libraries 1976-1979[*]

REGION		YEAR			
		1976	1977	1978	1979
CALICO (N=5)	Prof.	120.0	113.0	107.0	122.0
	Supt.	234.0	240.0	236.0	241.0
COIN (N=3)	Prof.	17.0	17.0	17.0	14.0
	Supt.	25.0	29.0	27.0	29.0
INFO/CAMLS (N=10)	Prof.	166.0	134.0	155.0	168.0
	Supt.	260.0	239.0	255.1	259.0
MILO (N=7)	Prof.	73.0[+]	72.0	84.0	78.0
	Supt.	121.0[+]	107.0	112.0	123.0
MOLO (N=2)	Prof.	37.0	36.0	36.0	31.0
	Supt.	80.0	79.0	74.0	64.0
NOLA (N=3)	Prof.	18.0	22.0	22.0	23.0
	Supt.	40.0	40.0	41.0	42.0
NORWELD (N=3)	Prof.	60.0	75.0	57.0	76.0
	Supt.	109.0	94.0	95.0	89.0
OVAL (N=1)	Prof.	21.0	19.0	23.0	23.0
	Supt.	55.0	54.0	54.0	56.0
SOLO (N=1)	Prof.	4.0	3.0	3.0	3.0
	Supt.	9.0	10.0	9.0	9.0
SWORL/GCLC (N=6)	Prof.	95.0	97.0	100.0	100.0
	Supt.	185.0	173.0	204.0	212.0

TABLE 35 continued

Total Professional and Support Staff by Year and Region

Academic Libraries 1976-1979*

REGION		1976	1977	1978	1979
WORLDS (N=1)	Prof.	6.0	6.0	6.0	6.0
	Supt.	10.0	10.0	10.0	10.0
STATE	Prof.	617.0+	594.0	610.0	644.0
	Supt.	1128.0+	1075.0	1117.1	1134.0

* The number of libraries represented in each region has been given under each region name, i.e. (N=n).

+ These totals include estimates for libraries for which data were unavailable in the annual statistical reports compiled by the State Library of Ohio.

TABLE 36

Total Professional and Support Staff by Year and Region

Special Libraries 1976-1979[*]

REGION		YEAR			
		1976	1977	1978	1979
CALICO (N=9)	Prof.	39.0[+]	44.0[+]	30.0[+]	31.3
	Supt.	135.0[+]	104.0[+]	121.0[+]	114.0
INFO/CAMLS (N=16)	Prof.	44.5[+]	56.0[+]	49.0[+]	56.5
	Supt.	98.0[+]	90.0[+]	101.0[+]	99.0
MILO (N=1)	Prof.	2.0	2.0	2.0	2.0
	Supt.	3.0	3.0	3.0	5.0
MOLO (N=1)	Prof.	1.0	3.0	1.0	2.0
	Supt.	6.0	4.0	6.0	7.0
OVAL (N=1)	Prof.	0.0	0.0	0.0	0.0
	Supt.	6.0	5.5	5.5	5.0
SWORL/GCLC (N=3)	Prof.	2.5	10.0	4.0	4.0
	Supt.	12.0	2.0	11.0	9.0
STATE	Prof.	89.0[+]	115.0[+]	86.0[+]	95.8
	Supt.	260.0[+]	208.5[+]	247.5[+]	239.0

[*] The number of libraries represented in each region has been given under each region name, i.e. (N= n).

[+] These totals include estimates for libraries for which data were unavailable in the annual statistical reports compiled by the State Library of Ohio.

Appendix D

Detailed Statistics on
Predicted Staff Size
For Public, Academic, and
Special Libraries, 1980-85:
A Regional Breakdown

TABLE 37

Total Professional and Support Staff by Year and Region

Public Libraries 1980-1985*

REGION		YEAR					
		1980	1981	1982	1983	1984	1985
CALICO (N=10)	Prof.	136.8	144.8	157.8	170.8	181.8	193.8
	Supt.	350.0	358.0	364.0	373.0	377.0	385.0
COIN (N=6)	Prof.	28.5	28.3	29.3	29.5	29.5	30.6
	Supt.	115.0	117.0	117.0	117.0	118.0	120.0
INFO/CAMLS (N=16)	Prof.	464.2	459.1	454.1	450.1	447.1	452.1
	Supt.	991.0	987.0	984.0	981.0	978.0	978.0
MILO (N=7)	Prof.	66.0	68.0	70.0	72.0	72.0	73.0
	Supt.	283.0	286.0	287.0	287.0	287.0	286.0
MOLO (N=7)	Prof.	27.6	30.6	32.6	32.6	32.6	33.6
	Supt.	194.0	195.0	195.0	195.0	195.0	195.0
NOLA (N=11)	Prof.	96.2	98.2	100.2	102.4	105.4	106.9
	Supt.	257.0	263.0	266.0	269.0	273.0	275.0

TABLE 37 continued

Total Professional and Support Staff by Year and Region

Public Libraries 1980-1985*

REGION		YEAR					
		1980	1981	1982	1983	1984	1985
NORWELD (N=9)	Prof.	94.4	95.2	96.4	96.4	97.4	99.4
	Supt.	326.0	328.0	328.0	330.0	331.0	333.0
OVAL (N=5)	Prof.	5.0	8.0	9.0	10.0	10.0	10.0
	Supt.	69.0	70.0	70.0	70.0	71.0	71.0
SOLO (N=4)	Prof.	9.5	11.5	11.5	12.5	13.5	14.5
	Supt.	77.0	78.0	78.0	78.0	79.0	82.0
SWORL/GCLC (N=5)	Prof.	139.5	141.5	145.5	145.5	145.5	150.5
	Supt.	402.0	409.0	416.0	421.0	426.0	429.0
WORLDS (N=4)	Prof.	16.6	17.6	17.6	19.6	20.6	21.6
	Supt.	86.0	88.0	89.0	89.0	90.0	95.0
STATE	Prof.	1084.3	1102.8	1124.0	1141.4	1155.4	1186.0
	Supt.	3150.0	3179.0	3194.0	3210.0	3225.0	3249.0

TABLE 37 continued

Total Professional and Support Staff by Year and Region

Public Libraries 1980-1985*

* All totals in this table include the 1979 data available for non-responding libraries. The figures are therefore conservative predictions of annual positions filled.
The number of libraries represented is given under each region, i.e. (N= n).

TABLE 38

Total Professional and Support Staff by Year and Region

Academic Libraries 1980-1985[*]

REGION		YEAR					
		1980	1981	1982	1983	1984	1985
CALICO (N=5)	Prof.	122.0	122.0	123.0	123.0	123.0	123.0
	Supt.	242.0	242.0	242.0	242.0	243.0	244.0
COIN (N=3)	Prof.	16.0	16.0	16.0+	17.0+	17.0+	17.0+
	Supt.	27.0	27.0	27.0+	28.0+	28.0+	28.0+
INFO/CAMLS (N=10)	Prof.	174.5	176.0	177.0	178.0	179.0	179.0
	Supt.	248.0	259.0	261.0	263.0	266.0	268.0
MILO (N=7)	Prof.	81.0	66.0	68.0	67.0	67.0	67.0
	Supt.	118.0	96.0	100.0	99.0	101.0	100.0
MOLO (N=2)	Prof.	31.5	32.0	32.0	32.0	32.0	32.0
	Supt.	64.0	64.0	64.0	64.0	64.0	64.0
NOLA (N=3)	Prof.	25.0	26.0	26.5	27.5	29.0	30.0
	Supt.	41.0	42.0	44.0	45.0	45.0	46.0

TABLE 38 continued

Total Professional and Support Staff by Year and Region

Academic Libraries 1980-1985*

REGION		1980	1981	1982	1983	1984	1985
NORWELD (N=3)	Prof.	76.0	78.0	79.0	80.0	81.0	82.0
	Supt.	89.0	89.0	89.0	89.0	90.0	91.0
OVAL (N=1)	Prof.	28.0	31.0	31.0	32.0	32.0	33.0
	Supt.	55.0	58.0	59.0	60.0	61.0	62.0
SOLO (N=1)	Prof.	3.0	3.0	3.0	3.0	4.0	4.0
	Supt.	9.0	9.0	9.0	8.0	8.0	8.0
SWORL/GCLC (N=6)	Prof.	103.0	104.0	105.0	106.0	108.0	109.0
	Supt.	212.0	213.0	215.0	216.0	217.0	217.0
WORLDS (N=1)	Prof.	6.0	6.0	6.0	6.0	6.0	6.0
	Supt.	10.0	10.0	10.0	10.0	10.0	10.0
STATE	Prof.	666.0	660.0	666.5	671.5	678.0	658.0
	Supt.	1115.0	1109.0	1120.0	1124.0	1133.0	1138.0

TABLE 38 continued

Total Professional and Support Staff by Year and Region

Academic Libraries 1980-1985*

* All totals in this table include the 1979 data available for non-responding libraries. The figures are therefore conservative predictions of annual positions filled.
The number of libraries represented is given under each region, i.e. (N=n).

+ These totals include estimates for libraries failing to predict through 1990. Estimates were calculated by substituting the last predicted figure for missing predictions, the assumption being no change.

TABLE 39

Total Professional and Support Staff by Year and Region

Special Libraries 1980-1985

REGION		YEAR					
		1980	1981	1982	1983	1984	1985
CALICO (N=9)	Prof.	35.3	38.3	39.0	40.0	40.0	40.0
	Supt.	133.0	134.0	136.0	137.0	137.0	138.0
INFO/CAMLS (N=16)	Prof.	53.1	54.1	56.1	54.1	58.1	56.1
	Supt.	101.0	102.0	104.0	105.0	108.0	109.0
MILO (N=1)	Prof.	2.0	2.0	3.0	4.0	4.0	4.0
	Supt.	5.0	6.0	6.0	8.0	8.0	9.0
MOLO (N=1)	Prof.	2.0	2.0	2.0	2.0	2.0	2.0
	Supt.	5.0	6.0	6.0	6.0	6.0	6.0
OVAL (N=1)	Prof.	0.0	0.0	0.0	0.0	1.0	1.0
	Supt.	4.0	4.0	4.0	5.0	5.0	5.0
SWORL/GCLC (N=3)	Prof.	4.5	4.5	5.0	5.0	5.0	5.0
	Supt.	8.0	8.0	9.0	9.0	9.0	9.0

TABLE 39 continued

Total Professional and Support Staff by Year and Region

Special Libraries 1980-1985*

REGION		YEAR					
		1980	1981	1982	1983	1984	1985
STATE	Prof.	96.9	100.9	105.1	105.1	110.1	108.1
	Supt.	256.0	260.0	265.0	270.0	273.0	276.0

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* All totals in this table include the 1979 data available for non-responding libraries. The figures are therefore conservative predictions of annual positions filled.
The number of libraries represented is given under each region, i.e. (N= n).

Appendix E

Detailed Statistics on Predicted Staff Size For Public, Academic, and Special Libraries, 1986-1990: A Regional Breakdown

Table 40

Estimated Total Professional and Support Staff by Region and Library Type, 1990*

	LIBRARY TYPE		
REGION	Public	Academic	Special**
CALICO			
Prof.	197	117	40
Supt.	398	244	139
COIN			
Prof.	31	18	-
Supt.	120	29	-
INFO/CAMLS			
Prof.	455	181	57
Supt.	967	268	107
MILO			
Prof.	75	68	5
Supt.	287	102	10
MOLO			
Prof.	34	32	2
Supt.	196	64	6
NOLA			
Prof.	110	31	-
Supt.	281	48	-
NORWELD			
Prof.	101	82	-
Supt.	335	91	-
OVAL			
Prof.	10	36	1
Supt.	70	66	5
SOLO			
Prof.	15	5	-
Supt.	82	9	-
SWORL/GCLC			
Prof.	156	111	6
Supt.	447	221	10
WORLDS			
Prof.	24	6	-
Supt.	96	10	-

*1990 totals are average regional staff sizes for a 5 year period, 1986-90. All totals in this table include the 1979 data available for non-responding libraries. The figures are therefore conservative predictions of annual positions filled.

**Dashes indicate no special libraries were sampled from this region.

Appendix F

Regional Breakdown of Number of Professional Librarians Employed in Public, Academic, Special, and School Libraries During 1979

TABLE 41

Regional Distribution of Professional Library Personnel in Ohio[1]

Region	Overall	Academic	Public	Special[2]	School[3]
CALICO	14.7	19.3	11.1	35.0	12.1
COIN	3.7	2.8	3.2	1.5	4.8
INFO/CAMLS	25.8	23.5	31.0	33.6	20.8
MILO	7.9	11.7	6.4	8.6	8.0
MOLO	5.7	2.6	8.7	2.3	4.8
NOLA	9.0	8.3	9.7	3.7	9.7
NORWELD	10.3	12.7	10.1	4.1	11.0
OVAL	3.5	1.3	3.1	1.9	4.7
SOLO	3.0	1.3	1.9	0.6	4.9
SWORL/GCLC	12.0	15.0	10.0	8.1	13.5
WORLDS	4.4	1.5	4.8	0.6	5.7
	100.0%	100.0%	100.0%	100.0%	100.0%

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1. 1979 data are reported for academic, special, and school libraries. 1978 data are reported for public libraries. All data are reported in the annual statistical directories published by The State Library of Ohio.

2. Special library figures include both professional and non-professional positions.

3. School library data are regional totals of certificated library personnel reported annually by The Ohio Department of Education.

Appendix G

Regional Breakdown
on Application Rates
For Responding Public, Academic,
and Special Libraries

TABLE 42

Number of Applicants Per Vacancy In Ohio Libraries: By Region

Region/Type		Increased	Same	Decreased
CALICO				
Overall	(N=18)	38.9%	44.4%	16.7%
Academic	(N=4)	25.0%	75.0%	0.0%
Public	(N=9)	44.4%	33.3%	22.2%
Special	(N=5)	40.0%	60.0%	0.0%
COIN				
Overall	(N=6)	66.6%	16.7%	16.7%
Academic	(N=2)	50.0%	0.0%	50.0%
Public	(N=4)	75.0%	25.0%	0.0%
Special	(N=0)	—	—	—
INFO/Camls				
Overall	(N=26)	65.4%	19.2%	15.4%
Academic	(N=7)	71.4%	28.6%	0.0%
Public	(N=9)	66.7%	11.1%	22.2%
Special	(N=10)	60.0%	20.0%	20.0%
MILO				
Overall	(N=10)	90.0%	0.0%	10.0%
Academic	(N=4)	75.0%	0.0%	25.0%
Public	(N=5)	100.0%	0.0%	0.0%
Special	(N=1)	100.0%	0.0%	0.0%
MOLO				
Overall	(N=6)	50.0%	50.0%	0.0%
Academic	(N=1)	0.0%	100.0%	0.0%
Public	(N=4)	75.0%	25.0%	0.0%
Special	(N=1)	0.0%	100.0%	0.0%
NOLA				
Overall	(N=11)	63.6%	18.2%	18.2%
Academic	(N=3)	66.7%	0.0%	33.3%
Public	(N=8)	62.5%	25.0%	12.5%
Special	(N=0)	—	—	—
NORWELD				
Overall	(N=7)	57.1%	42.9%	0.0%
Academic	(N=2)	50.0%	50.0%	0.0%
Public	(N=5)	60.0%	40.0%	0.0%
Special	(N=0)	—	—	—
OVAL				
Overall	(N=6)	33.3%	50.0%	16.7%
Academic	(N=1)	0.0%	100.0%	0.0%
Public	(N=4)	25.0%	50.0%	25.0%
Special	(N=1)	100.0%	0.0%	0.0%
SOLO				
Overall	(N=4)	0.0%	75.0%	25.0%
Academic	(N=1)	0.0%	0.0%	100.0%
Public	(N=3)	0.0%	100.0%	0.0%
Special	(N=0)	—	—	—
SWORL				
Overall	(N=11)	54.5%	18.2%	27.3%
Academic	(N=5)	20.0%	20.0%	60.0%
Public	(N=4)	100.0%	0.0%	0.0%
Special	(N=2)	50.0%	50.0%	0.0%
WORLDS				
Overall	(N=5)	40.0%	40.0%	20.0%
Academic	(N=1)	0.0%	100.0%	0.0%
Public	(N=4)	50.0%	25.0%	25.0%
Special	(N=0)	—	—	—

Appendix H

Regional Breakdown
on With Master/Certificated Staff
Ratios For Responding
School Districts, 1979-1990

Table 42

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
CALICO	ELEMENTARY								
	MEAN %	35.3	33.7	43.1	52.9	64.2	63.6	64.0	69.4
	MEDIAN %	28.6	33.3	33.3	50.0	66.7	62.9	63.7	87.5
	N	9.0	9.0	5.0	5.0	5.0	4.0	4.0	5.0
	MISS	1.0	1.0	5.0	5.0	5.0	6.0	6.0	5.0
	MIDDLE SCHL								
	MEAN %	33.3	50.0	75.0	100.0	100.0	100.0	100.0	100.0
	MEDIAN %	25.0	50.0	75.0	100.0	100.0	100.0	100.0	100.0
	N	6.0	6.0	2.0	2.0	4.0	4.0	4.0	4.0
	MISS	4.0	4.0	8.0	8.0	6.0	6.0	6.0	6.0
	JUNIOR H.S.								
	MEAN %	55.6	55.6	55.6	72.2	50.0	50.0	100.0	50.0
	MEDIAN %	66.7	66.7	66.7	66.7	50.0	50.0	100.0	50.0
	N	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0
	MISS	7.0	7.0	7.0	7.0	9.0	9.0	9.0	9.0
	SENIOR H.S.								
	MEAN %	49.1	57.5	60.0	66.7	83.3	83.3	83.3	100.0
	MEDIAN %	33.3	58.3	50.0	50.0	100.0	100.0	100.0	100.0
	N	9.0	10.0	5.0	5.0	5.0	5.0	5.0	5.0
	MISS	9.0	9.0	5.0	5.0	5.0	4.0	4.0	5.0
	REGIONAL								
	MEAN%	37.0	41.9	53.2	63.0	74.8	72.1	74.5	82.0
	MEDIAN %	30.8	50.0	61.5	69.2	85.7	73.4	73.9	93.3
	N	9.0	9.0	5.0	5.0	5.0	4.0	4.0	5.0
	MISS	1.0	1.0	5.0	5.0	5.0	6.0	6.0	5.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
COIN	ELEMENTARY								
	MEAN %	30.0	30.0	30.0	31.3	31.3	31.3	31.3	58.3
	MEDIAN %	10.0	10.0	10.0	12.5	12.5	12.5	12.5	50.0
	N	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0
	MISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
	MIDDLE SCHL								
	MEAN %	44.4	44.4	55.6	55.6	66.7	66.7	66.7	100.0
	MEDIAN %	66.7	66.7	66.7	66.7	100.0	100.0	100.0	100.0
	N	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0
	MISS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0
	JUNIOR H.S.								
	MEAN %	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
	MEDIAN %	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
	N	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	MISS	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	SENIOR H.S.								
	MEAN %	83.3	83.3	90.0	90.0	90.0	90.0	90.0	100.0
	MEDIAN %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
	MISS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
	REGIONAL								
	MEAN %	55.8	55.8	61.5	62.5	66.5	66.5	66.5	79.2
	MEDIAN %	57.1	57.1	60.0	60.0	80.0	90.0	80.0	91.7
	N	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
	MISS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
INFO/CAMLS	ELEMENTARY								
	MEAN %	65.4	68.2	72.8	76.8	75.0	70.8	75.8	70.2
	MEDIAN %	73.3	77.5	81.7	92.9	93.8	88.9	94.4	100.0
	N	18.0	16.0	16.0	16.0	16.0	17.0	18.0	17.0
	MISS	2.0	4.0	4.0	4.0	4.0	3.0	2.0	3.0
	MIDDLE SCHL								
	MEAN %	80.0	80.0	80.0	80.0	75.0	73.3	75.6	80.0
	MEDIAN %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0
	MISS	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0
	JUNIOR H.S.								
	MEAN %	57.5	69.8	63.4	62.4	64.4	68.4	74.4	78.2
	MEDIAN %	60.0	100.0	70.8	78.3	100.0	100.0	100.0	100.0
	N	17.0	17.0	17.0	17.0	17.0	16.0	16.0	13.0
	MISS	3.0	3.0	3.0	3.0	3.0	4.0	4.0	7.0
	SENIOR H.S.								
	MEAN %	75.7	78.8	78.7	81.4	81.6	84.1	89.7	100.0
	MEDIAN %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	20.0	20.0	20.0	20.0	20.0	20.0	20.0	17.0
	MISS	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.0
	REGIONAL								
	MEAN %	69.5	72.6	73.3	75.9	75.7	75.4	79.4	79.2
	MEDIAN %	73.2	73.0	76.1	81.7	82.5	83.1	83.3	89.6
	N	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.0
	MISS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
MILO	ELEMENTARY								
	MEAN %	61.9	61.2	72.3	75.3	67.4	67.4	65.3	58.7
	MEDIAN %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	50.0
	N	12.0	13.0	11.0	11.0	11.0	11.0	11.0	11.0
	MISS	6.0	5.0	7.0	7,0	7.0	7.0	7.0	7.0
	MIDDLE SCHL								
	MEAN %	25.0	0.0	8.0	8.0	8.0	18.0	48.0	20.0
	MEDIAN %	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
	N	4.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
	MISS	14.0	15.0	13.0	13.0	13.0	13.0	13.0	13.0
	JUNIOR H.S.								
	MEAN %	40.7	40.7	51.9	68.5	66.7	66.7	70.0	72.7
	MEDIAN %	45.0	45.0	50.0	100.0	100.0	100.0	100.0	100.0
	N	10.0	10.0	9.0	9.0	9.0	9.0	10.0	11.0
	MISS	8.0	8.0	9.0	9.0	9.0	9.0	8.0	7.0
	SENIOR H.S.								
	MEAN %	62.2	73.4	71.9	69.0	66.0	66.0	66.0	100.0
	MEDIAN %	84.6	100.0	100.0	100.0	75.0	75.0	75.0	100.0
	N	18.0	17.0	17.0	17.0	17.0	17.0	17.0	16.0
	MISS	18.0	17.0	17.0	17.0	17.0	17.0	17.0	16.0
	REGIONAL								
	MEAN %	56.6	56.5	61.2	65.0	61.7	62.8	65.8	72.9
	MEDIAN %	50.0	50.0	70.0	71.4	62.5	62.5	72.7	75.0
	N	18.0	17.0	17.0	17.0	17.0	17.0	17.0	16.0
	MISS	0.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
MOLO	ELEMENTARY								
	MEAN %	54.5	54.5	66.7	75.0	75.0	75.0	88.9	83.3
	MEDIAN %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	11.0	11.0	9.0	8.0	8.0	8.0	9.0	8.0
	MISS	4.0	4.0	6.0	7.0	7.0	7.0	6.0	7.0
	MIDDLE SCHL								
	MEAN %	46.7	70.0	50.0	50.0	50.0	50.0	50.0	50.0
	MEDIAN %	33.3	100.0	50.0	50.0	50.0	50.0	50.0	50.0
	N	5.0	5.0	3.0	3.0	3.0	9.0	3.0	3.0
	MISS	10.0	10.0	12.0	12.0	12.0	12.0	12.0	12.0
	JUNIOR H.S.								
	MEAN %	60.0	66.7	60.0	50.0	75.0	75.0	60.0	60.0
	MEDIAN %	100.0	100.0	100.0	50.0	100.0	100.0	100.0	100.0
	N	5.0	6.0	5.0	4.0	4.0	4.0	5.0	5.0
	MISS	10.0	9.0	10.0	11.0	11.0	11.0	10.0	10.0
	SENIOR H.S.								
	MEAN %	56.7	66.7	62.5	65.0	65.0	65.0	72.7	100.0
	MEDIAN %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	15.0	15.0	12.0	10.0	10.0	10.0	11.0	10.0
	MISS	15.0	15.0	10.0	10.0	10.0	10.0	11.0	10.0
	REGIONAL								
	MEAN%	54.8	65.7	61.0	63.0	65.0	65.0	68.8	80.0
	MEDIAN %	50.0	75.0	75.0	75.0	75.0	75.0	80.0	83.3
	N	15.0	15.0	10.0	10.0	10.0	10.0	11.0	10.0
	MISS	0.0	0.0	5.0	5.0	5.0	5.0	4.0	5.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
NOLA	ELEMENTARY								
	MEAN %	56.8	55.2	61.4	65.2	59.5	59.5	59.1	66.2
	MEDIAN %	58.3	52.8	55.6	50.0	50.0	50.0	50.0	50.0
	N	10.0	10.0	9.0	9.0	10.0	10.0	10.0	9.0
	MISS	5.0	5.0	6.0	6.0	5.0	5.0	5.0	6.0
	MIDDLE SCHL								
	MEAN %	37.5	37.5	37.5	37.5	37.5	30.0	33.3	50.0
	MEDIAN %	25.0	25.0	25.0	25.0	25.0	0.0	0.0	50.0
	N	4.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0
	MISS	11.0	11.0	11.0	11.0	11.0	10.0	10.0	11.0
	JUNIOR H.S.								
	MEAN %	34.1	44.5	51.9	51.9	51.9	57.5	57.5	57.5
	MEDIAN %	19.6	25.0	45.8	45.8	45.8	62.5	62.5	62.5
	N	8.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
	MISS	7.0	8.0	9.0	9.0	9.0	9.0	9.0	9.0
	SENIOR H.S.								
	MEAN %	54.9	63.1	62.2	58.3	64.1	66.7	78.2	100.0
	MEDIAN %	57.1	66.7	66.7	66.7	66.7	66.7	100.0	100.0
	N	15.0	14.0	13.0	13.0	13.0	13.0	13.0	12.0
	MISS	15.0	14.0	13.0	13.0	13.0	13.0	13.0	12.0
	REGIONAL								
	MEAN %	46.6	51.0	56.6	55.0	57.2	58.1	63.0	75.7
	MEDIAN %	37.5	50.0	50.0	50.0	52.9	64.7	64.7	66.7
	N	15.0	14.0	13.0	13.0	13.0	13.0	13.0	12.0
	MISS	0.0	1.0	2.0	2.0	2.0	2.0	2.0	3.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
NORWELD	ELEMENTARY								
	MEAN %	0.0	33.3	20.0	20.0	30.0	30.0	30.0	50.0
	MEDIAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
	N	6.0	6.0	5.0	5.0	5.0	5.0	5.0	4.0
	MISS	2.0	2.0	3.0	3.0	3.0	3.0	3.0	4.0
	MIDDLE SCHL								
	MEAN %	.	.	.	.	.	.	.	.
	MEDIAN %	.	.	.	.	.	.	.	.
	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MISS	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
	JUNIOR H.S.								
	MEAN %	35.7	50.0	41.7	41.7	41.7	41.7	58.3	58.3
	MEDIAN %	0.0	50.0	25.0	25.0	25.0	25.0	75.0	75.0
	N	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
	MISS	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
	SENIOR H.S.								
	MEAN %	60.4	64.6	81.0	81.0	81.0	81.0	81.0	100.0
	MEDIAN %	50.0	83.3	100.0	100.0	100.0	100.0	100.0	100.0
	N	8.0	6.0	7.0	7.0	7.0	7.0	7.0	6.0
	MISS	8.0	8.0	7.0	7.0	7.0	7.0	7.0	6.0
	REGIONAL								
	MEAN %	41.2	56.2	56.0	57.0	59.4	59.4	62.9	74.4
	MEDIAN %	33.3	58.3	50.0	57.1	57.1	57.1	66.7	73.2
	N	8.0	8.0	7.0	7.0	7.0	7.0	7.0	6.0
	MISS	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
OVAL	ELEMENTARY								
	MEAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MEDIAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	MISS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MIDDLE SCHL								
	MEAN %	.	.	.	.	.	.	.	.
	MEDIAN %	.	.	.	.	.	.	.	.
	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	JUNIOR H.S.								
	MEAN %	.	.	.	.	.	.	.	.
	MEDIAN %	.	.	.	.	.	.	.	.
	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	SENIOR H.S.								
	MEAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	MEDIAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	N	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	MISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	REGIONAL								
	MEAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
	MEDIAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
	N	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	MISS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
SOLA	ELEMENTARY								
	MEAN %	0.0	16.7	16.7	16.7	16.7	16.7	16.7	16.7
	MEDIAN %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	MISS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MIDDLE SCHL								
	MEAN %	.	.	.	.	.	.	.	.
	MEDIAN %	.	.	.	.	.	.	.	.
	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MISS	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	JUNIOR H.S.								
	MEAN %	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
	MEDIAN %	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
	N	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	MISS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	SENIOR H.S.								
	MEAN %	33.3	66.7	66.7	66.7	66.7	66.7	66.7	100.0
	MEDIAN %	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	MISS	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	REGIONAL								
	MEAN%	10.3	32.5	32.5	32.5	32.5	32.5	32.5	43.7
	MEDIAN %	14.3	16.7	16.7	16.7	16.7	16.7	16.7	50.0
	N	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	MISS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
SWORL/GCLC	ELEMENTARY								
	MEAN %	47.3	50.7	47.3	51.3	51.9	52.7	60.7	63.1
	MEDIAN %	43.3	50.0	50.0	50.0	50.0	50.0	66.7	66.7
	N	10.0	9.0	8.0	8.0	8.0	8.0	9.0	7.0
	MISS	1.0	2.0	3.0	3.0	3.0	3.0	2.0	4.0
	MIDDLE SCHL								
	MEAN %	44.4	56.7	58.3	58.3	66.7	58.3	58.3	58.3
	MEDIAN %	33.3	50.0	66.7	66.7	100.0	66.7	66.7	66.7
	N	3.0	5.0	4.0	4.0	5.0	4.0	4.0	4.0
	MISS	8.0	6.0	7.0	7.0	6.0	7.0	7.0	7.0
	JUNIOR H.S.								
	MEAN %	47.6	51.0	52.8	50.0	58.3	50.0	50.0	50.0
	MEDIAN %	33.3	40.0	41.7	50.0	58.3	50.0	50.0	50.0
	N	7.0	7.0	6.0	5.0	6.0	5.0	5.0	3.0
	MISS	4.0	4.0	5.0	6.0	5.0	6.0	6.0	8.0
	SENIOR H.S.								
	MEAN %	49.4	67.9	67.6	71.3	71.3	80.6	80.6	100.0
	MEDIAN %	36.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	10.0	11.0	9.0	9.0	9.0	9.0	9.0	7.0
	MISS	10.0	10.0	9.0	9.0	10.0	9.0	9.0	7.0
	REGIONAL								
	MEAN %	42.1	54.2	50.2	54.3	59.6	57.2	65.5	75.0
	MEDIAN %	40.5	46.4	47.6	50.0	56.3	50.0	71.4	71.4
	N	10.0	10.0	9.0	9.0	10.0	9.0	9.0	7.0
	MISS	1.0	1.0	2.0	2.0	1.0	2.0	2.0	4.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY REGION, LEVEL, AND YEAR

REGION		1979	1980	1981	1982	1983	1984	1985	1986-90
WORLDS	ELEMENTARY								
	MEAN %	50.0	50.0	66.7	66.7	83.3	83.3	83.3	100.0
	MEDIAN %	50.0	50.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	2.0	2.0	3.0	3.0	3.0	3.0	3.0	2.0
	MISS	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0
	MIDDLE SCHL								
	MEAN %	.	.	.	.	.	.	.	.
	MEDIAN %	.	.	.	.	.	.	.	.
	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MISS	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	JUNIOR H.S.								
	MEAN %	22.2	22.2	22.2	50.0	50.0	50.0	50.0	66.7
	MEDIAN %	33.3	33.3	33.3	50.0	50.0	50.0	50.0	66.7
	N	3.0	3.0	3.0	2.0	2.0	2.0	2.0	1.0
	MISS	1.0	1.0	1.0	2.0	2.0	2.0	2.0	3.0
	SENIOR H.S.								
	MEAN %	50.0	50.0	62.5	83.3	83.3	83.3	83.3	100.0
	MEDIAN %	50.0	50.0	75.0	100.0	100.0	100.0	100.0	100.0
	N	4.0	4.0	4.0	3.0	3.0	3.0	3.0	2.0
	MISS	4.0	4.0	4.0	3.0	3.0	3.0	3.0	2.0
	REGIONAL								
	MEAN%	39.2	39.2	51.7	72.2	75.4	75.4	75.4	91.7
	MEDIAN %	45.0	45.0	53.3	83.3	83.3	83.3	83.3	91.7
	N	4.0	4.0	4.0	3.0	3.0	3.0	3.0	2.0
	MISS	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0

Table 42, continued

PERCENTAGE OF CERTIFIED LIBRARIANS HOLDING A MASTER"S DEGREE IN LIBRARY SCIENCE OR EDUCATIONAL MEDIA: BY STATE LEVEL, AND YEAR

STATE	1979	1980	1981	1982	1983	1984	1985	1986-90
ELEMENTARY								
MEAN %	47.7	50.8	56.4	60.2	60.1	59.3	63.0	64.5
MEDIAN %	50.0	50.0	66.7	75.6	66.7	66.7	80.0	88.2
N	86.0	84.0	74.0	73.0	74.0	74.0	77.0	70.0
MISS	24.0	26.0	36.0	37.0	36.0	36.0	33.0	40.0
MIDDLE SCHL								
MEAN %	45.0	52.2	49.6	51.5	56.8	54.8	61.0	63.0
MEDIAN %	41.7	50.0	50.0	50.0	75.0	50.0	100.0	100.0
N	30.0	31.0	26.0	26.0	29.0	29.0	29.0	28.0
MISS	80.0	79.0	84.0	84.0	81.0	81.0	81.0	82.0
JUNIOR H.S.								
MEAN %	46.1	53.6	53.3	57.1	59.1	60.1	64.2	65.5
MEDIAN %	50.0	50.0	50.0	66.7	66.7	66.7	100.0	100.0
N	63.0	63.0	58.0	55.0	54.0	52.0	54.0	49.0
MISS	47.0	47.0	52.0	55.0	56.0	58.0	56.0	61.0
SENIOR H.S.								
MEAN %	59.6	68.2	70.1	71.5	72.7	74.5	78.1	100.0
MEDIAN %	66.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	108.0	108.0	96.0	93.0	93.0	93.0	94.0	83.0
MISS	108.0	106.0	94.0	93.0	94.0	92.0	93.0	84.0
REGIONAL								
MEAN%	50.7	56.7	59.3	62.3	63.8	63.7	67.4	75.8
MEDIAN %	50.0	57.1	66.7	66.7	66.7	66.7	70.0	75.0
N	108.0	106.0	94.0	93.0	94.0	92.0	93.0	84.0
MISS	2.0	4.0	16.0	17.0	16.0	18.0	17.0	26.0

Appendix I

Predicted School Library Positions through 1985: By Region and Grade Level

TABLE 43

The Number of Certified Librarians and Certified Librarians with Master's Degree

CALICO*
(N=13)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	128.0	130.0	129.0	129.0	128.0	134.0	135.0
W/Master	47.0	50.0	51.0	53.0	56.0	52.0	53.0
Middle School							
Certified	10.0	10.0	10.0	10.0	17.0	17.0	17.0
W/Master	3.0	5.0	5.0	6.0	13.0	13.0	13.0
Junior High School							
Certified	34.0	34.0	34.0	34.0	29.0	29.0	29.0
W/Master	17.0	17.0	17.0	18.0	14.0	14.0	15.0
Senior High School							
Certified	53.0	53.0	53.0	53.0	53.0	53.0	54.0
W/Master	28.0	30.0	31.0	32.0	34.0	34.0	35.0

TABLE 43 continued

The Number of Certified Librarians and Certified Librarians with Masters Degree

CALICO

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	225.0	227.0	226.0	226.0	227.0	233.0	235.0
W/Master	95.0	102.0	104.0	109.0	117.0	113.0	116.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school district represented is given under each region, i.e. (N= n)

TABLE 44

The Number of Certified Librarians and Certified Librarians with Master's Degree

COIN*

(N=6)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	8.0	8.0	8.0	7.0	7.0	7.0	7.0
W/Master	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Middle School							
Certified	7.0	7.0	7.0	7.0	7.0	7.0	7.0
W/Master	4.0	4.0	5.0	5.0	6.0	6.0	6.0
Junior High School							
Certified	2.0	2.0	2.0	2.0	2.0	3.0	3.0
W/Master	1.0	1.0	1.0	1.0	1.0	2.0	2.0
Senior High School							
Certified	9.0	9.0	9.0	9.0	9.0	9.0	9.0
W/Master	7.0	7.0	8.0	8.0	8.0	8.0	8.0

TABLE 44 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

COIN

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	26.0	26.0	26.0	25.0	25.0	26.0	26.0
W/Master	14.0	14.0	16.0	16.0	17.0	18.0	18.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

TABLE 45

The Number of Certified Librarians and Certified Librarians with Master's Degree

INFO/CAMLS*
(N=24)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	195.0	171.0	165.0	161.0	160.0	160.0	163.0
W/Master	123.0	116.0	121.0	125.0	125.0	126.0	131.0
Middle School							
Certified	7.0	8.0	10.0	12.0	14.0	15.0	15.0
W/Master	6.0	7.0	9.0	11.0	11.0	11.0	12.0
Junior High School							
Certified	77.0	73.0	70.0	67.0	64.0	63.0	62.0
W/Master	45.0	48.0	45.0	45.0	46.0	46.0	45.0
Senior High School							
Certified	92.0	95.0	93.0	93.0	92.0	92.0	92.0
W/Master	77.0	80.0	78.0	80.0	80.0	81.0	83.0

TABLE 45 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

INFO/CAMLS

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	371.0	347.0	338.0	333.0	330.0	330.0	332.0
W/Master	251.0	251.0	253.0	261.0	262.0	264.0	271.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N=n).

TABLE 46

The Number of Certified Librarians and Certified Librarians with Master's Degree

MILO*
(N=20)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elememtary							
Certified	29.0	29.0	26.0	26.0	28.0	28.0	34.0
W/Master	16.0	14.0	14.0	15.0	15.0	15.0	19.0
Middle School							
Certified	8.0	7.0	14.0	14.0	14.0	14.0	14.0
W/Master	1.0	0.0	2.0	2.0	2.0	3.0	5.0
Junior High School							
Certified	21.0	22.0	23.0	23.0	24.0	24.0	25.0
W/Master	9.0	9.0	11.0	13.0	13.0	13.0	14.0
Senior High School							
Certified	44.0	42.0	43.0	44.0	46.0	46.0	46.0
W/Master	30.0	32.0	32.0	32.0	32.0	32.0	32.0

TABLE 46 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

MILO

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	102.0	100.0	106.0	107.0	112.0	112.0	119.0
W/Master	56.0	55.0	59.0	62.0	62.0	63.0	70.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

TABLE 47

The Number of Certified Librarians and Certified Librarians with Master's Degree

MOLO*
(N=19)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	19.5	16.5	15.5	15.5	15.5	15.5	16.5
W/Master	8.5	7.5	7.5	7.5	7.5	7.5	9.5
Middle School							
Certified	11.0	9.0	7.0	7.0	7.0	7.0	7.0
W/Master	4.0	5.0	3.0	3.0	3.0	3.0	3.0
Junior High School							
Certified	7.5	7.5	6.5	6.5	6.5	6.5	7.5
W/Master	3.5	4.5	3.5	3.5	4.5	4.5	4.5
Senior High School							
Certified	25.0	25.0	24.0	24.0	24.0	24.0	25.0
W/Master	12.0	14.0	12.0	13.0	13.0	13.0	15.0

TABLE 47 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

MOLO

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	63.0	58.0	53.0	53.0	53.0	53.0	56.0
W/Master	28.0	31.0	26.0	27.0	28.0	28.0	32.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

TABLE 48

The Number of Certified Librarians and Certified Librarians with Master's Degree

NOLA*
(N=16)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	32.0	34.0	32.0	34.0	35.0	35.0	36.0
W/Master	16.0	16.0	16.0	18.0	19.0	19.0	19.0
Middle School							
Certified	7.0	6.0	6.0	6.0	6.0	7.0	8.0
W/Master	3.0	2.0	2.0	2.0	2.0	2.0	3.0
Junior High School							
Certified	20.0	18.0	18.0	18.0	19.0	19.0	19.0
W/Master	5.0	7.0	7.0	7.0	8.0	9.0	9.0
Senior High School							
Certified	31.0	30.0	30.0	30.0	31.0	31.0	29.0
W/Master	17.0	20.0	21.0	20.0	22.0	23.0	24.0

TABLE 48 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

NOLA

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	90.0	88.0	86.0	88.0	91.0	92.0	92.0
W/Master	41.0	45.0	46.0	47.0	51.0	53.0	55.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

TABLE 49

The Number of Certified Librarians and Certified Librarians with Master's Degree

NORWELD*
(N=9)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	84.0	78.0	79.0	80.0	81.0	81.0	81.0
W/Master	23.0	25.0	25.0	26.0	27.0	27.0	27.0
Middle School							
Certified	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W/Master	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Junior High School							
Certified	11.0	11.0	11.0	11.0	11.0	11.0	11.0
W/Master	6.0	7.0	7.0	7.0	7.0	7.0	8.0
Senior High School							
Certified	28.0	26.0	26.0	26.0	26.0	26.0	26.0
W/Master	17.0	17.0	18.0	18.0	18.0	18.0	18.0

TABLE 49 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

NORWELD

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	123.0	115.0	116.0	117.0	118.0	118.0	118.0
W/Master	46.0	49.0	50.0	51.0	52.0	52.0	53.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

TABLE 50

The Number of Certified Librarians and Certified Librarians with Master's Degree

OVAL*
(N=1)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	1.0	1.0	1.0	1.0	1.0	1.0	1.0
W/Master	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle School							
Certified	-	0.0	0.0	0.0	0.0	0.0	0.0
W/Master	-	0.0	0.0	0.0	0.0	0.0	0.0
Junior High School							
Certified	-	0.0	0.0	0.0	0.0	0.0	0.0
W/Master	-	0.0	0.0	0.0	0.0	0.0	0.0
Senior High School							
Certified	1.0	1.0	1.0	1.0	1.0	1.0	1.0
W/Master	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The Number of Certified Librarians and Certified Librarians with Master's Degree

OVAL

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	2.0	2.0	2.0	2.0	2.0	2.0	2.0
W/Master	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

TABLE 51

The Number of Certified Librarians and Certified Librarians with Master's Degree

SOLO*
(N=4)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	19.0	14.0	14.0	14.0	14.0	14.0	14.0
W/Master	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Middle School							
Certified	-	-	-	-	-	-	-
W/Master	-	-	-	-	-	-	-
Junior High School							
Certified	3.0	3.0	3.0	3.0	3.0	3.0	3.0
W/Master	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Senior High School							
Certified	6.0	6.0	6.0	6.0	6.0	6.0	6.0
W/Master	2.0	3.0	3.0	3.0	3.0	3.0	3.0

TABLE 51 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

SOLO

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	28.0	23.0	23.0	23.0	23.0	23.0	23.0
W/Master	3.0	5.0	5.0	5.0	5.0	5.0	5.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

TABLE 52

The Number of Certified Librarians and Certified Librarians with Master's Degree

SWORL/GCLC*
(N=11)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	115.5	114.5	113.5	113.5	113.8	113.8	113.5
W/Master	44.0	44.0	44.0	46.0	46.5	46.8	50.5
Middle School							
Certified	5.0	11.0	7.0	7.0	8.0	7.0	7.0
W/Master	2.0	6.0	4.0	4.0	5.0	4.0	4.0
Junior High School							
Certified	24.0	21.0	11.0	10.0	11.0	10.0	10.0
W/Master	8.0	9.0	5.0	5.0	6.0	5.0	5.0
Senior High School							
Certified	36.0	37.0	36.0	37.0	38.0	38.0	38.0
W/Master	12.0	18.0	17.0	19.0	20.0	22.0	22.0

TABLE 52 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

SWORL/GCLC

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	180.5	183.5	167.5	167.5	170.8	168.8	168.5
W/Master	66.0	77.0	60.0	74.0	77.5	77.8	81.5

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N =n).

TABLE 53

The Number of Certified Librarians and Certified Librarians with Master's Degree

WORLDS*
(N=4)

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Elementary							
Certified	7.0	7.0	8.0	9.0	10.0	10.0	10.0
W/Master	1.0	1.0	2.0	2.0	3.0	3.0	3.0
Middle School							
Certified	-	-	-	-	-	-	-
W/Master	-	-	-	-	-	-	-
Junior High School							
Certified	7.0	7.0	7.0	7.0	7.0	7.0	7.0
W/Master	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Senior High School							
Certified	7.0	7.0	7.0	7.0	7.0	7.0	7.0
W/Master	4.0	4.0	5.0	5.0	5.0	5.0	5.0

TABLE 53 continued

The Number of Certified Librarians and Certified Librarians with Master's Degree

WORLDS

LEVEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985
Regional Totals							
Certified	21.0	21.0	21.0	23.0	24.0	24.0	24.0
W/Master	7.0	7.0	9.0	10.0	11.0	11.0	11.0

* All totals in this table include the 1979 data available for non-responding school districts. The figures are therefore conservative predictions of annual positions filled.
The number of school districts represented is given under each region, i.e.(N= n).

Appendix J

School Library Personnel:
Supply and Demand

The primary objective of this study was to determine if and where alternative/additional graduate education programs in library and information science should be developed in Ohio. The report proper looked at supply and demand for libraries at the three traditional library types. This appendix examines the job market for school librarians, principally those with master degrees in educational media or library science.

Estimates on projected supply of school librarians with graduate degrees in library science and/or educational media were obtained. All educational media programs at Ohio institutions which grant master degrees with majors or minors in educational media were asked to estimate the number of master degrees to be awarded through 1990. Several programs did not respond to the survey. Rough, conservative estimates were obtained by substituting data on degrees awarded in 1978-79 as listed in the Ohio Library Association's directory: Educational Opportunities in Ohio for Library Media Careers, Fourth Revision, 1980. Table 54 reports these estimates.

Ohio programs predicted an increase of over 50 percent in the number of master degrees awarded by 1990. This growth was due to program expansion by the Miami University, Ohio State University, and to a lesser degree, by Ohio University. No projections were received from the Kent State media program. Since it produced the most degrees of any program in 1978-79, it is likely it would also experience growth similar to the Miami program. This growth was not reflected, however, in Table 54.

The number of graduates from ALA programs who would be available for school library positions was estimated from data reported earlier in Table 33. Specifically supply was defined as the difference between the total

Table 54

Estimated Number of Master Degrees to be Awarded by Ohio Media Programs, 1981-1990

1981	1982	1983	1984	1985	Annual Average for 1986-90
82	104	112	120	132	143

number of MLS degrees granted (absolute) and the total number of MLS degrees available for PAS libraries (PAS). These data have been incorporated with other supply and demand data reported in Table 55.

According to school district projections, the number of positions available to master level librarians would double between 1979 and 1985 and double again by 1990. Population demand figures in Table 55 assume that the smaller school districts not included in the original sample would have funds to hire at the higher salary level. This potential overestimate of demand should be considered when comparing supply and demand projections.

Table 55 indicates that the supply of master level personnel will not increase at the same rate as demand. Between 1979 and 1990, a 55 percent increase is projected in number of master degrees awarded. This compares to a 325 percent increase in demand. If the Bureau of Labor Statistics' rate of actual entry into the job market is applied to absolute supply in Table 55, the job market for graduate level school librarians, however, will still be tight through 1990. In 1979, 1985, and 1990 respectively, estimated oversupplies of 66, 79, and 16 librarians occur. The job market would be tight but improving.

Many students enrolled in graduate media or library science programs may currently be employed as school librarians. Upon graduation, these individuals would be able to remain in their present positions with advancement to a higher level on the teachers' salary schedule. They should therefore not be included in the supply estimates.

The enrollment studies conducted by the Graduate Education for Librarianship in Ohio Project found that six percent of the certificated, non-master degreed school librarians had master degrees in progress in either library science or educational media. This would equal roughly 105 librar-

Table 55

Supply and Demand for School Library Positions at the MLS/M-Ed Level

YEAR	DEMAND	
	Sample	Population
1979	16	32
1985	32	64
1990	68	136
	SUPPLY	
	Absolute	BLS 80% Entry Rate
1979	123	98
1985	179	143
1990	190	152
	POSITIONS NEEDED ASSUMING 20% OF GRADUATES ALREADY EMPLOYED	
1979	78	
1985	114	
1990	121	

ians, approximately 20 percent of the number of graduate students enrolled in Ohio media programs in 1978-79.

Table 55 has estimated supply, assuming 20 percent of the graduates already have jobs. Even with these additional adjustments, the job market would continue to be a buyer's market through 1985. By 1990, the balance would shift slightly. Each year, however, the pool of delayed entrants would expand. Twenty percent delayed entrance rate, starting with 1981 graduates, would produce a pool of over 150 librarians to compete with new graduates in 1986 through 1990. This does not take into account either out-of-state entrants or market re-entrants.

It appears that the bright future described earlier in this report for graduate level staff was overly optimistic. By 1990 the situation should improve but remain competitive.

This predicted surplus of trained librarians does not signify compliance with quality Standards ~~students~~ for library service. The draft of the Revised Minimum Standards for Ohio Schools, issued December 12, 1980 by the Ohio State Board of Education has proposed the following minimum standard: 3301-35-03: (B)(1)(b)(i)(b)(i) (p. 16, line 13)

> One certificated library media specialist per seven hundred fifty pupils districtwide; each library media center has services of one certificated library media specialist, with no specialist responsible for more than three media centers. (Each library media center is staffed full-time by a certificated library media specialist or by an aide/volunteer under the supervision of a certificated library media specialist.)

As part of the standard review process, current library staffing levels in school districts were evaluated using both the 1:750 ratio proposed and a more liberal ratio of 1:1000. If the 1:750 ratio were applied today, over 950 additional certificated librarians would be required in the state of Ohio at an estimated cost of over 19 million dollars. If the standard were reduced to 1 certificated librarian for every 1,000 students districtwide, the number required would drop to slightly less than 500. Meeting this reduced ratio would require over 10 million dollars in additional salaries.

Table 56 presents a regional breakdown of this need. Both standard ratios indicate that the largest need occurs in northeastern Ohio school districts. The southwest region has the second highest percentage of needed positions. As the last column in Table 56 demonstrates, these regional percentages do not necessarily reflect poor staffing. Areas of highest need are also the areas employing the most certificated librarians. (Readers interested in county breakdowns should examine Table 57 which reports number of additional certificated librarians needed, rounded to the closest .5 FTE).

The employment outlook for certificated school librarians remains uncertain. School districts, faced with declining enrollment, project school closings and reduction of library staff. Minimum standards, as currently proposed, call for additional certificated personnel.

The job market should continue to be competitive for all librarians through 1985, but begin to improve towards the end of the decade as enrollments reverse their downward trend. The largest percentage of openings should result from replacement needs and not expansion.

Table 56

Additional Positions Needed to Meet Proposed Minimum Standards for Ohio Public School Libraries

Region	Proposed Standard** 1:750	1:100	Percentage of Total Librarians Employed in Ohio*
Northwest	15%	16%	17%
Northeast	33%	31%	35%
Central	16%	15%	17%
Southeast	10%	10%	9%
Southwest	27%	28%	22%

*Percentages based on data reported in A Survey of Projected Personnel Needs in Ohio's Academic, Public, Special, and School Libraries. (p. 102), prepared by The Graduate Education for Librarianship in Ohio Project in March, 1981.

**Data based on computer analysis conducted by Special Projects Division of the Ohio Department of Education.

Table 57

Estimated Number of Additional Certificated Librarians Needed in Ohio Counties to Meet Proposed Minimum Standards*

County	1:750	1:1000
Adams	2.5	.5
Allen	10.0	5.5
Ashland	6.0	3.5
Ashtabula	15.0	9.0
Athens	3.0	1.5
Auglaize	2.0	1.0
Belmont	11.0	7.0
Brown	.5	0.0
Butler	26.0	12.0
Carroll	1.0	0.0
Champaign	4.5	2.5
Clark	14.0	6.0
Clermont	11.0	6.0
Clinton	5.0	2.5
Columbiana	12.0	6.0
Coshocton	3.5	1.5
Crawford	6.0	3.5
Cuyahoga	42.0	18.0
Darke	6.0	3.5
Defiance	4.0	2.5
Delaware	7.5	4.5
Erie	9.0	4.0
Fairfield	10.0	4.0
Fayette	4.0	2.0
Franklin	63.0	28.5
Fulton	6.5	4.5
Gallia	3.5	2.0
Greene	18.5	11.0
Guernsey	3.5	2.0
Hamilton	63.0	32.5
Hancock	1.0	.5
Hardin	2.5	.5
Harrison	1.5	.5
Henry	4.0	2.5
Highland	4.5	2.5
Hocking	4.0	2.5
Holmes	2.5	1.5
Huron	5.0	2.0
Jackson	5.0	3.0
Jefferson	6.5	2.0
Knox	5.5	3.5
Lake	16.0	7.0
Lawrence	5.5	2.5
Licking	8.0	5.0
Logan	3.0	1.0
Lorain	23.5	9.0
Lucas	55.5	33.0
Madison	3.0	1.5
Mahoning	24.5	12.0
Marion	6.5	2.5
Medina	15.5	9.5
Meigs	2.0	.5
Mercer	5.5	4.0
Miami	12.0	6.5
Monroe	1.0	0.0
Montgomery	73.5	45.5
Morgan	2.5	1.5
Morrow	4.0	2.5
Muskingum	8.0	3.0
Noble	2.0	1.5
Ottawa	4.5	2.5
Pike	4.0	2.0
Paulding	2.0	1.0
Perry	3.5	1.5
Pickaway	7.5	4.5
Portage	12.0	6.5
Preble	1.5	1.0
Putnam	3.0	2.0
Richland	13.5	6.5
Ross	5.0	2.0
Sandusky	6.5	3.5
Scioto	6.0	2.5
Seneca	4.0	1.5
Shelby	4.0	2.0
Stark	46.0	24.0
Summit	61.5	33.5
Trumbull	20.0	8.5
Tuscarawas	11.5	7.0
Union	2.5	1.0
Van Wert	0.0	0.0
Vinton	2.0	1.0

Table 57, continued

County	1:750	1:1000	County	1:750	1:1000
Williams	2.0	1.0	Warren	13.0	6.5
Wood	9.5	5.5	Washington	7.0	3.5
Wyandot	0.0	0.0	Wayne	12.5	7.0

*Rough estimates, rounded to closest .5 FTE.